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A new gnaphosid spider record from Turkey (Araneae: Gnaphosidae)

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Abstract

The gnaphosid spider species *Drassodes caspius* Ponomarev & Tsvetkov, 2006 is recorded for the first time from Turkey. Its morphology is briefly described and illustrated.

Keywords: Spiders, Araneae, Gnaphosidae, *Drassodes caspius*, new record, Turkey.

Introduction

Spiders, Order Araneae, under Class Arachnida, form the largest group of this class with 112 families, 4058 genera and 46762 species in the world (World Spider Catalog, 2017). Family Gnaphosidae is represented by 125 genera and 2195 species in the world (World Spider Catalog, 2017). Within Turkish spider fauna, with a total of 332 genera and 1022 species, it is represented by 133 species of 30 genera (Bayram *et al.*, 2017). In this paper, we add one gnaphosid spider species to the spider fauna of Turkey. This species is *Drassodes caspius* Ponomarev & Tsvetkov, 2006. This record brings the total number of gnaphosids recorded in Turkey to 134 species (11 *Drassodes* species).

Material and Methods

One specimen was collected during the day by hand aspirator from under a stone and deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM). Pictures were taken using a Leica S8APO microscope by means of a Leica DC 160 camera, in a dish with paraffin on the bottom. Different size holes were made in

the paraffin to keep specimen in the right position. Identification depended on Ponomarev & Tsvetkov (2006). Images were montaged using "Combine- ZM" image stacking software and "Photoshop CS5" image editing software. The specimen was preserved in 70% ethanol. Measurements are given in millimetres. Leg measurements are shown as: total length (femur, patella, tibia, metatarsus, and tarsus); measurements of leg segments were taken from the dorsal side.

Results

Drassodes caspius Ponomarev & Tsvetkov, 2006 (Figs. 1-3)
Material examined: 1♂, Kütahya Province, Beşdeğirmen village (39°31'18"N, 30°03'28"E), 17.05.2013. 2♂, Çankırı Province, Ilgaz District, Korgun village (40°50'29"N, 33°34'51"E), 06.20.2016.
Male description (Figs. 1-2). Total length 8.8. Prosoma 4.0 long, 3.0 wide. Opisthosoma 4.8 long, 2.3 wide. While ocular area is dark brown and extensively covered with bright brown hairs, the remaining parts of prosoma are light brown and covered with light brown hairs. Clypeus dark brown and covered with a few dark colour hairs. Chelicerae dark brown and light brown haired dorsally. Sternum yellowish brown and intensely covered with bright brown hairs. Labium and maxillae brown and intensely hairy. Legs I-II tarsus and metatarsus brown, other segments light yellowish brown. Legs III-IV tarsus brown, other segments light yellowish brown. Dorsal part of opisthosoma is greyish but the ventral part is light yellow. Spinnerets light brown. Palp as in Fig. (3). Leg formula IV-I-II-III. Leg measurements (n = 4): I 11.2 (3.2, 1.4, 2.8, 2.1, 1.7), II 10.3 (2.9, 1.3, 2.5, 2.0, 1.6), III 8.7 (2.4, 1.1, 2.0, 1.8, 1.4), IV 11.7 (3.2, 1.4, 2.6, 2.9, 1.6).
Distribution: Kazakhstan, Russia (World Spider Catalog, 2017).

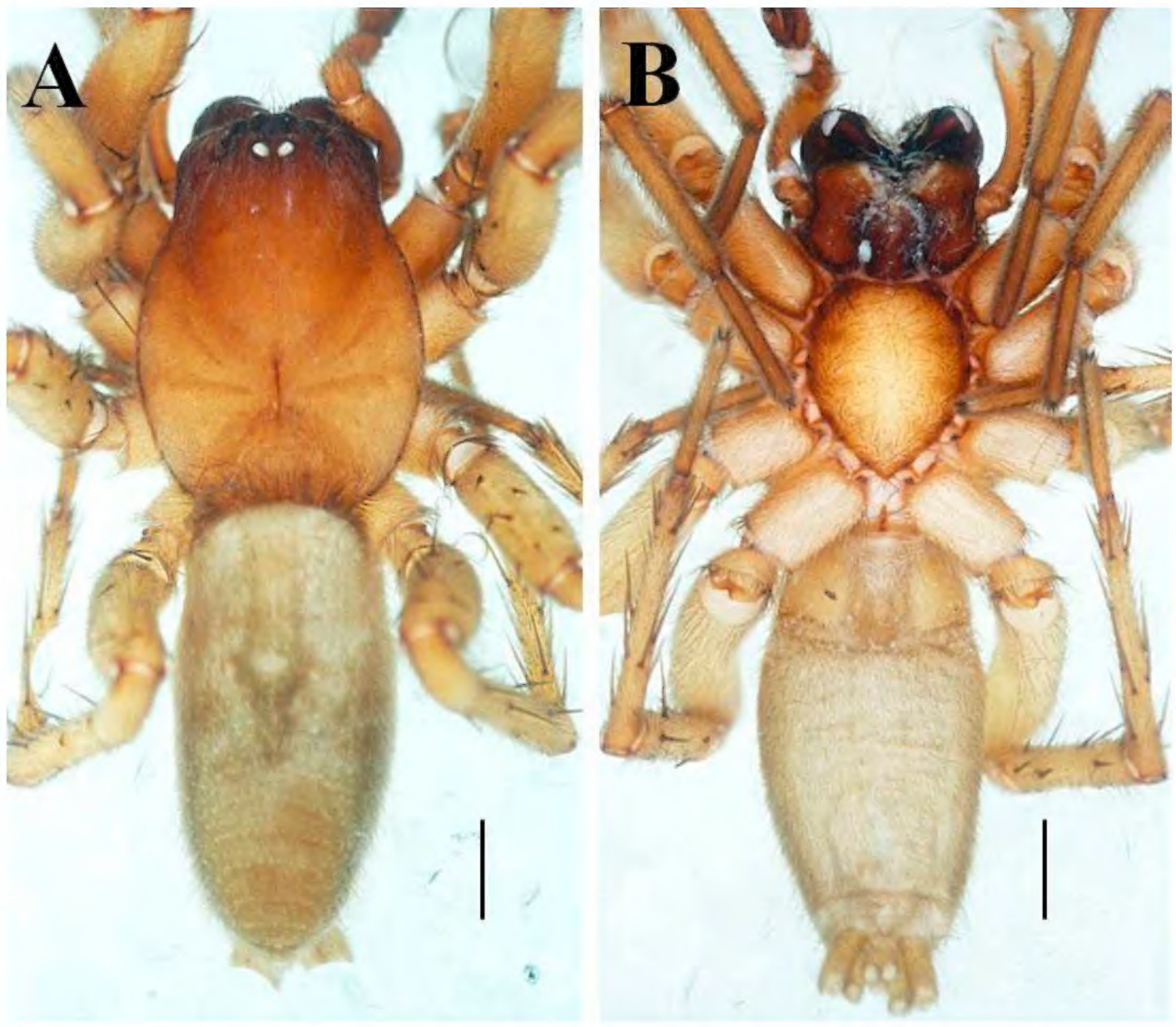

Fig. 1. *Drassodes caspius* ♂, habitus. A. dorsal view. B. ventral view. Scale bar: 1.0 mm.

Fig. 2. *Drassodes caspius* ♂. Ocular area, frontal view. Scale bar: 0.5 mm.

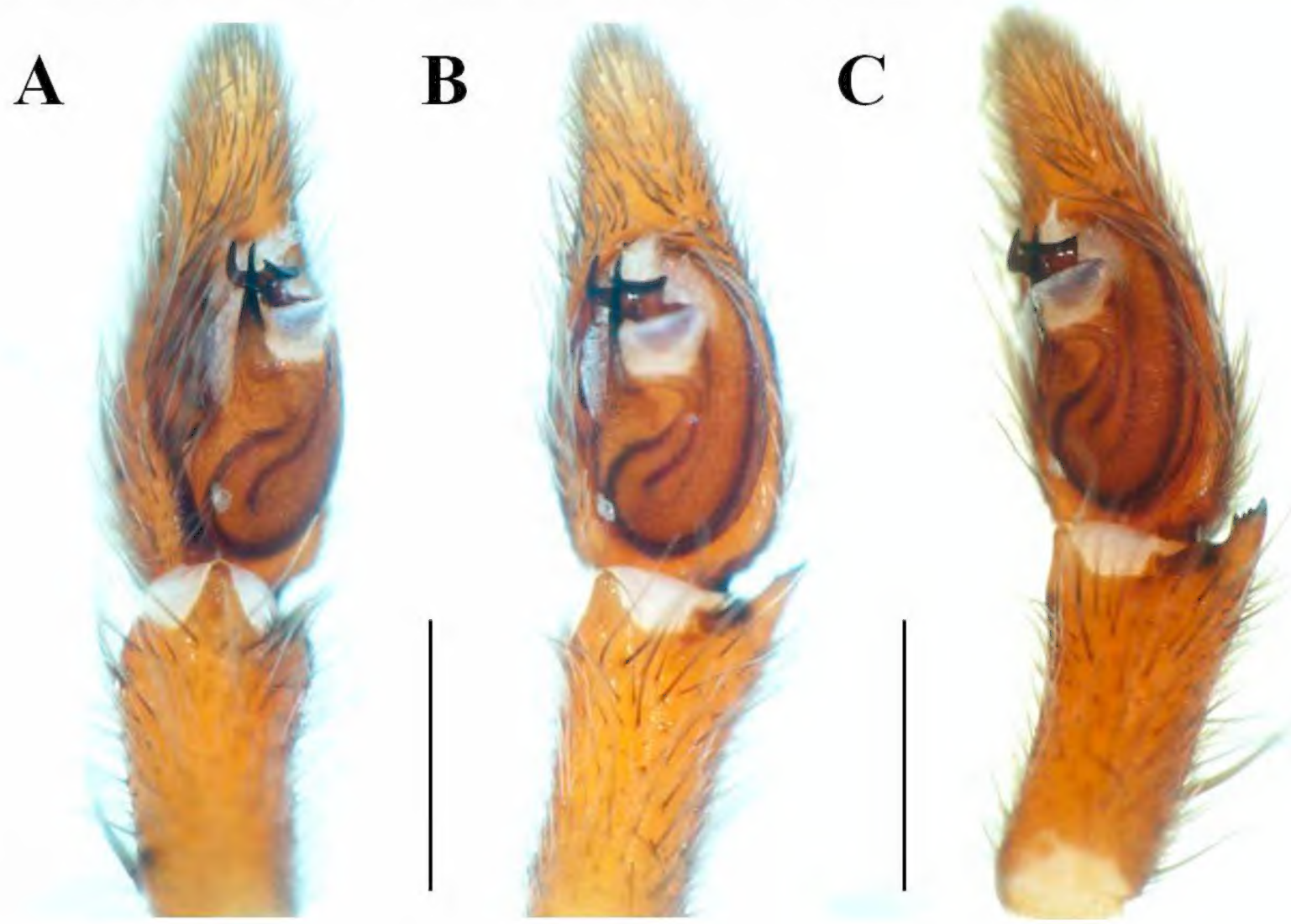

Fig. 3. *Drassodes caspius* ♂, palp. A. prolateral view. B. ventral view. C. retrolateral view. Scale bar: 0.5 mm.

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Two new records of little-known myrmecomorphic spiders in Turkey (Araneae: Phrurolithidae and Zodariidae)

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Abstract

Two myrmecomorphic spiders are recorded for the first time from Turkey. Their morphology is briefly described and illustrated.

Keywords: Spiders, Araneae, Zodariidae, Phrurolithidae, Myrmecomorphy**,** new records, Turkey.

Introduction

Myrmecomorphs are arthropods that have evolved a morphological resemblance to ants (Pekár & Jarab, 2011). Myrmecomorphy in spiders is usually considered a type of Batesian mimicry in which spiders are gaining protection from predators by means of their resemblance to aggressive or unpleasant ants (Cushing, 1997).

Family Phrurolithidae was formerly included in the Corinnidae as subfamily Phrurolithinae. This family includes 218 species in 14 genera over the world. Zodariidae is a medium-sized family of spiders distinguished by their long anterior spinnerets on a common base, and other reduced spinnerets. This family includes 1123 species in 84 genera, with a worldwide distribution, but it is most abundant in tropical and subtropical regions (World Spider Catalog, 2017).

In this study, little-known myrmecomorphic spiders *Phrurolithus pullatus* Kulczyński, 1897 and *Zodarion morosoides* Bosmans, 2009 are determined from Turkey for the first time (Bayram *et al.*, 2017; Demir & Seyyar, 2017).

Material and Methods

Five myrmecomorphic spiders were collected from different regions in Turkey. The collection was performed by hand aspirator and litter reducer (sifter). Species identification was managed under Leica S8AP0 stereomicroscope. Identification depended on Heimer & Nentwig (1991) and Bosmans (2009). SEM micro photographs were taken by Jeol JSM 5600 Scanning Electron Microscope. All the specimens are preserved in 70% ethanol. Measurements are given in millimetres. Specimens were deposited in the collection of the Arachnological Museum of Kırıkkale University (KUAM).

Results

Phrurolithus pullatus Kulczyński, 1897
Material examined: 2♂, Sinop Province, Drannaz Mountain, 25.05.2012.

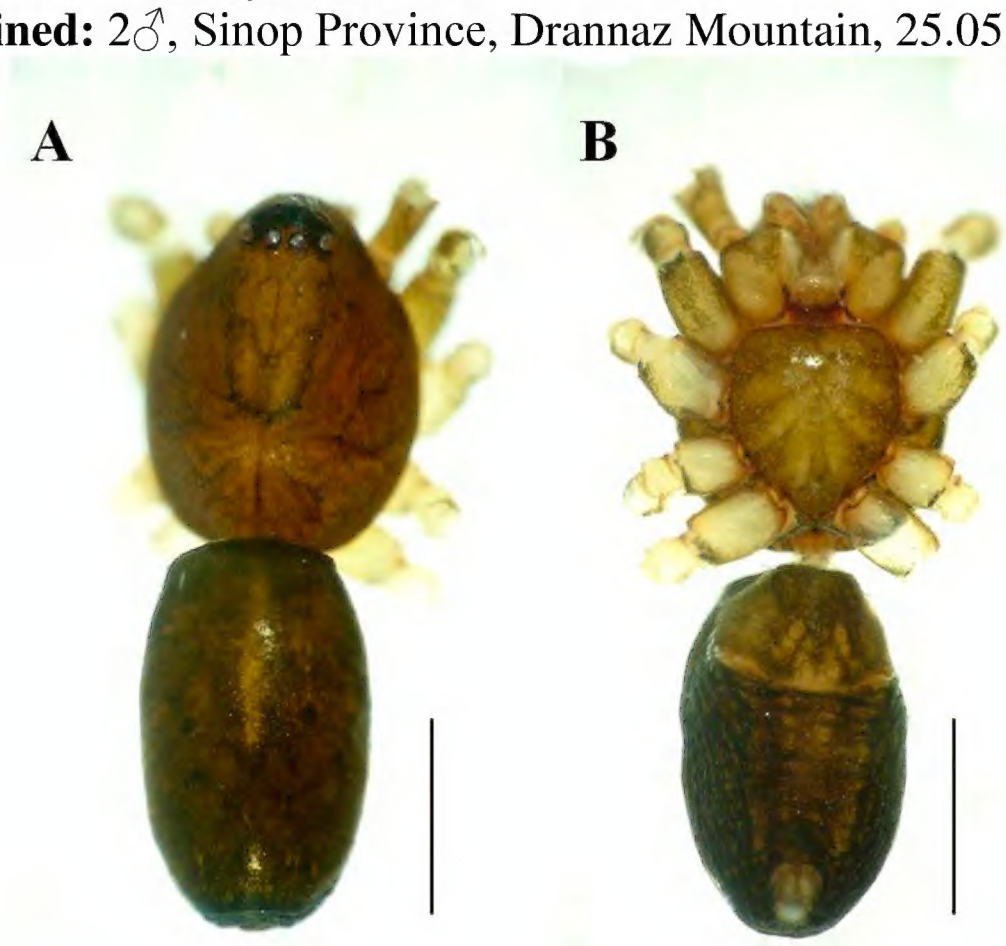


Fig. 1. *Phrurolithus pullatus* ♂, habitus. A. dorsal view. B. ventral view (Scale: 0.5).

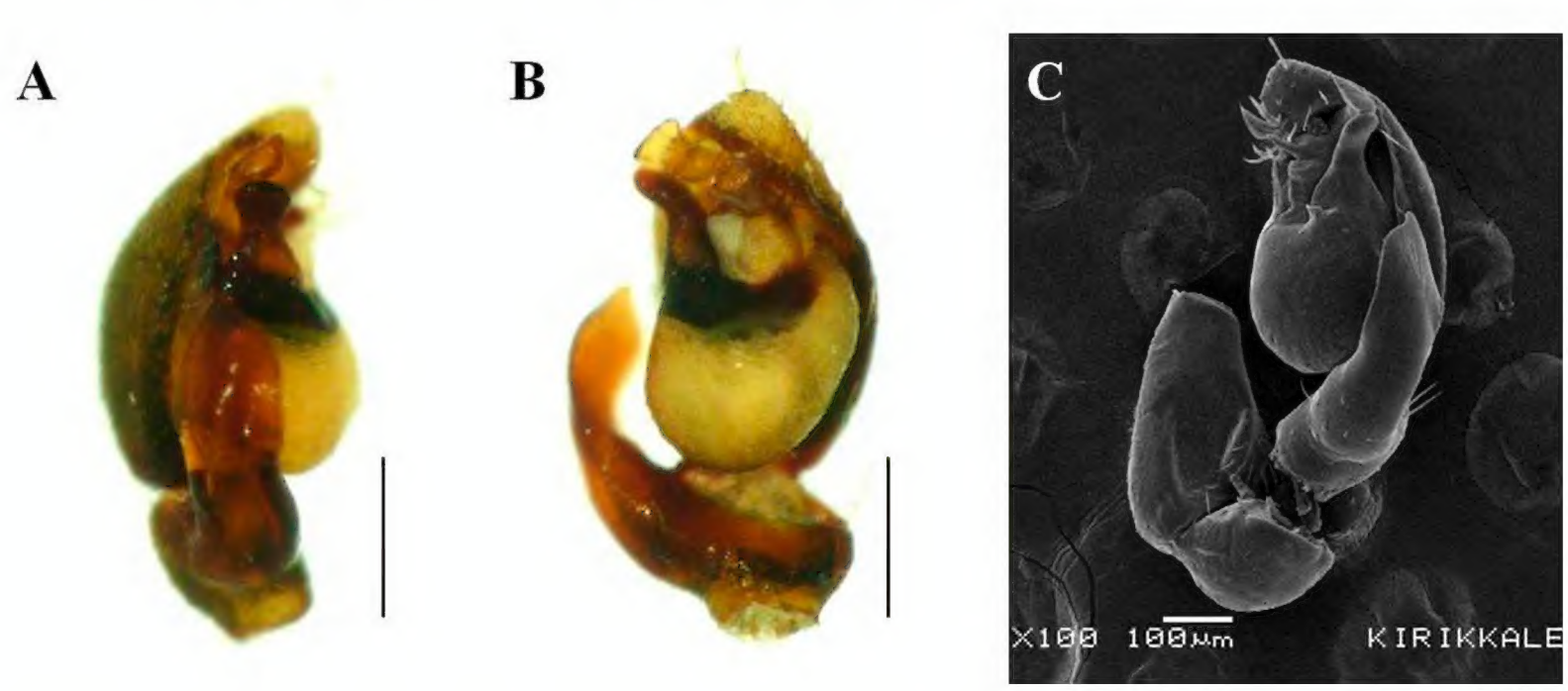


Fig. 2. *Phrurolithus pullatus* ♂, palp. A. lateral view. B. ventral view. C. retrolateral view (Scale: 0.2).

Male description: Total length 2.0. Prosoma 0.95 long, 0.75 wide. Opisthosoma 1.05 long, 0.60 wide. Prosoma dark brown. Opisthosoma brown, with bright spots on dark ground (Fig. 1). Palpal tibial apophysis with symmetric tip. Bulbus distally with 2 apophyses, overtopping embolus. Pedipalp characteristic, as in Fig (2).
Distribution: Europe to Central Asia (World Spider Catalog, 2017).

Zodarion morosoides Bosmans, 2009
Material examined: 2♂, 1♀, Kütahya Province, 20.05.2015.

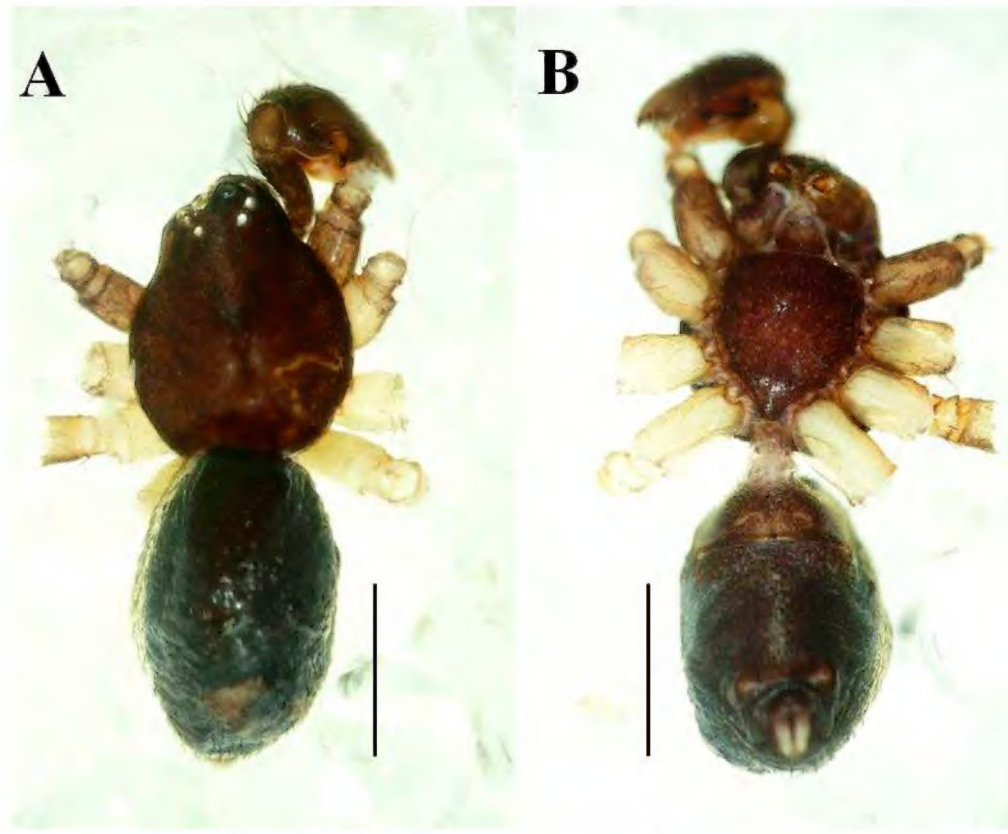
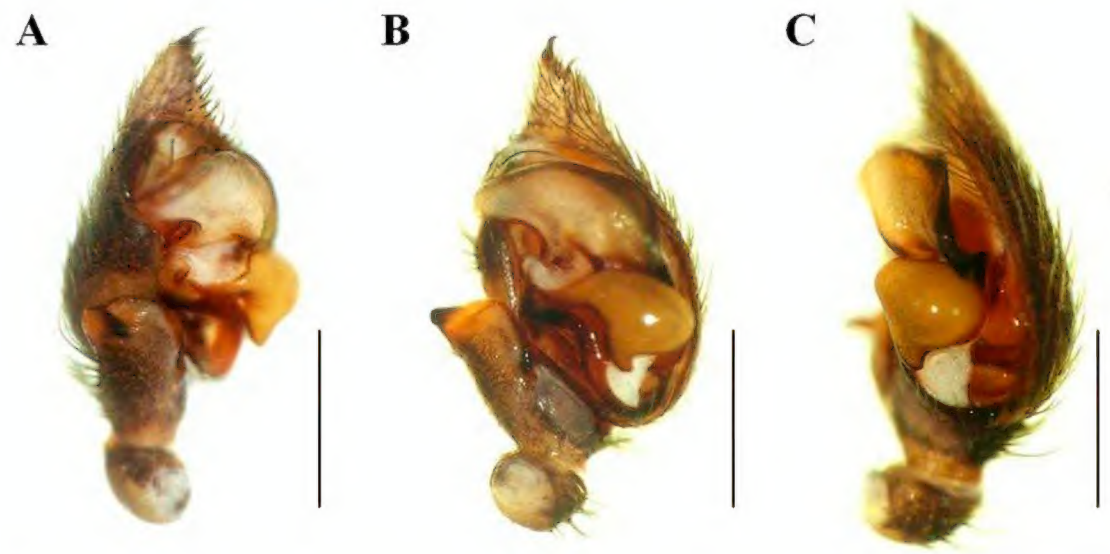


Fig. 3. *Zodarion morosoides* ♂, habitus. A. dorsal view. B. ventral view (Scale: 1.0).



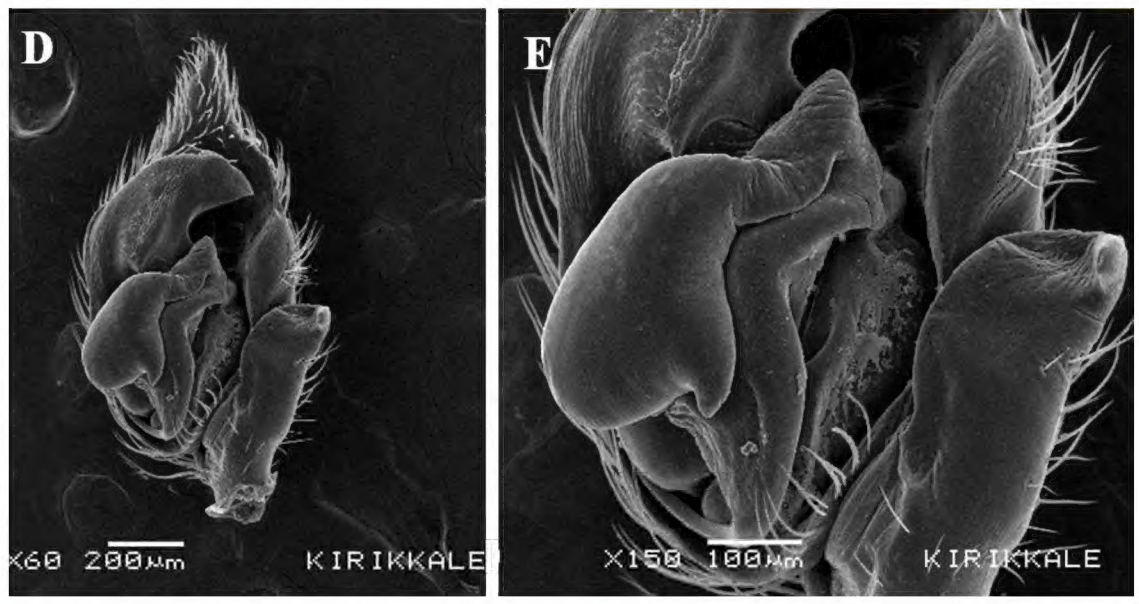


Fig. 4. *Zodarion morosoides* ♂, palp. A. prolateral view. B. ventral view. C. retrolateral view. (Scale: 0.5). D. SEM micrograph, ventral view, E. SEM micrograph, median apophysis enlarged, ventral view.

Male description: Total length 3.55. Prosoma 1.70 long, 1.40 wide. Opisthosoma 1.85 long, 1.20 wide. Prosoma dark brown. Opisthosoma dorsum dark sepia (Fig. 3). Tibial apophysis with very wide base, terminally recurved and rounded. Median apophysis very large with characteristic retrolateral groove. Pedipalp as in Fig. (4). Leg formula IV-II-III-II. Leg measurements (n = 4): I 5.75 (1.40, 0.30, 1.0, 1.20, 1.85), II 6.0 (1.50, 0.55, 1.30, 1.70, 0.95), III 5.90 (1.45, 0.50, 1.25, 1.90, 0.80), IV 8.35 (2.0, 0.60, 2.0, 2.70, 1.05).
Distribution: Greece (World Spider Catalog, 2017).

Discussion

Our specimens morphometric measurements and other general features were little different from the other common European and Asian specimens. Morphological features as colour, folium or scutum of all specimens were a little different. Now, the total number of species recorded from Turkey is increased to 3 of family Phrurolithidae and 22 of family Zodariidae.

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Two new records of *Dysdera* from Turkey (Araneae: Dysderidae)

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Abstract

Two species of the spider family Dysderidae, *Dysdera dunini* Deeleman-Reinhold, 1988 and *Dysdera krisis* Komnenov & Chatzaki, 2016 are included in the araneofauna of Turkey for the first time. The two species, resembling each other, are diagnosed and compared by palpal structures. Morphological descriptions and diagnoses are presented together with figures of the copulatory organs.

Keywords: Araneae, Dysderidae, *Dysdera dunini, Dysdera krisis,* new record, Turkey.

Introduction

Spiders can live in all kinds of habitats. For this reason they have a very wide spread. There are more than 46000 species and about 4000 genera described today (World Spider Catalog, 2017). In Turkey, more than 1000 species and more than 330 genera are known (Bayram *et al.*, 2017). Every day this number is increasing. In the world, 265 species and subspecies of genus *Dysdera* are known, and from these 23 species are recorded from Turkey (Bayram *et al.*, 2017; Demir & Seyyar, 2017). This study records *Dysdera dunini* Deeleman-Reinhold, 1988 and *Dysdera krisis* Komnenov & Chatzaki, 2016 from Turkey. They are quite similar species. Therefore their differences have been pointed out especially the pedipalp morphology. They can be distinguished by the bifurcated, scissors-like apical part of distal division of males (Komnenov *et al.*, 2016). However, *D. krisis* is separated by the apical part in brownish-black colour, with scissors in the terminal while the apical part in the *D. dunini* is flattened in the terminal.

Material and Methods

Dysderid samples studied were collected in July 2013 and May 2015 from Bolu province in the Black Sea Region and Kütahya province in the Aegean region. The distance between these two regions is only 200 km. They show climatic similarities in this respect. Specimens were first brought to the laboratory in 70% ethyl alcohol, and species identification depended on: Nentwig *et al.* (2017) and Komnenov *et al.* (2016). The images of the pedipalp were made by means of a Leica DC 160 digital camera attached to a LEICA S8APO stereomicroscope. Some photographs were combined using CombineZP. Photoshop CS2 and Paint were used for enhancing photographic images. All measurements are in millimetres (mm). The following abbreviations are used in the text: Pd: prodorsal, Pl: prolateral, PLE: posteriorlateral eye, Pv: proventral, Rd: retrodorsal, Rl: retrolateral, Rv: retroventral, and KUAM: Zoology Museum of Kırıkkale University.

Results

Dysdera Latreille, 1804

Dysdera dunini Deeleman-Reinhold, 1988 (Figs. 1c, 1d, 2c, 2d)

Material examined: ♂ Bolu province, Mudurnu district, Pine Forest (40°27'52.89"N, 31°12'49.14"E), 10.07.2013, 912 m, leg. T. Danışman (KUAM).

Description: Body length 4.92; cephalothorax length 2.24, width 2.0; abdomen length 2.68, width 1.84; sternum length 1.28; labium length 0.58. Eyes: PLE-PLE 0.49. Cephalothorax brown, darker toward the eyes area. Chelicerae up to two-quarters of the length of cephalothorax. Legs reddish moreover femur III and IV are a little darker than the rest. Abdomen with sparse hairs on light yellow colour. Sternum, labium, maxillae, and chelicerae brown. Fang teeth in 1+2 form. Leg spination of male given in Table (1). Leg formula IV, I, II, III. Anterior tarsi with three claws. The tegulum is small, distally shows equal angular division. The posterior apophysis is white with wide coarse surface. Apical part darker, rather penguin feet shaped; flattened in the terminal. The species has been found in a meadow area under dry turf.

Distribution: Russia, Ukraine, Georgia, Azerbaijan (World Spider Catalog, 2017).

Table 1. Leg spination of (♂) *Dysdera dunini* and (♂)*Dysdera krisis*.

	D. dunini		***D. krisis***	
	Tibia III	Tibia IV	Tibia III	Tibia IV
Pd	0	0	1	0
Rd	0	0	1	1
Pl	2	0	0	0
Rl	0	1	0	0
Pv	1	2	2	2
Rv	0	2	0	2
Total	3	5	4	5

Dysdera krisis Komnenov & Chatzaki, 2016 (Figs. 1a, 1b, 2a, 2b)

Material examined: ♂ Kütahya province, Tunçbilek district, Mixed Forest (39°37'24.51"N, 29°28'47.58"E), 08.05.2015, 866 m, leg. T. Danışman (KUAM).

Description: Body length 5.72; cephalothorax length 2.4, width 2.12; abdomen length 3.32, width 1.84; sternum length 1.52; labium length 0.68. Eyes: PLE-PLE 0.56. Cephalothorax light brown. Chelicerae almost halfway up to the length of cephalothorax. Legs reddish and leg IV is a little darker than the rest. Abdomen yellow, with vaguely mildly dark patterned. Sternum, labium, maxillae, and chelicerae brown. Fang teeth in 1+1+1 form. Leg spination of male given in Table (1). Leg formula IV, I, II, III. Anterior tarsi with three claws. The tegulum is small than distal division of the bulbus in ventral view. Distal part shows equally angular division. The posterior apophysis is white, coarse with wide surface and thumb-like. Apical part darker, rather brownish-black colour with scissors in the terminal part. The species has been found in a huge rocky area in the oak forest.

Distribution: Greece (World Spider Catalog, 2017).

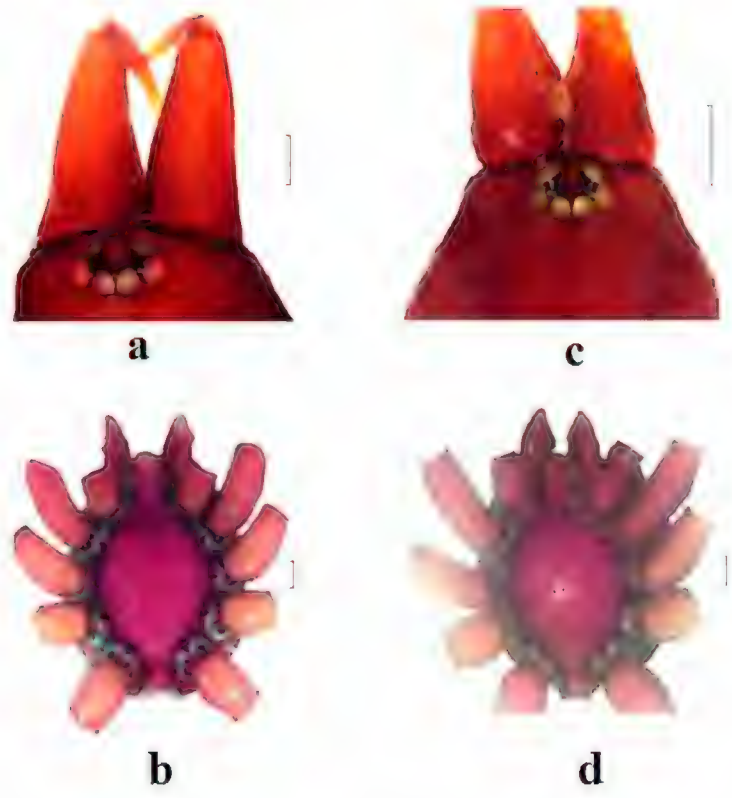

Fig. 1. *Dysdera krisis* a-b. *D. dunini* c-d. Eyes a, c. Sternum b, d. (Scale: 0.25).

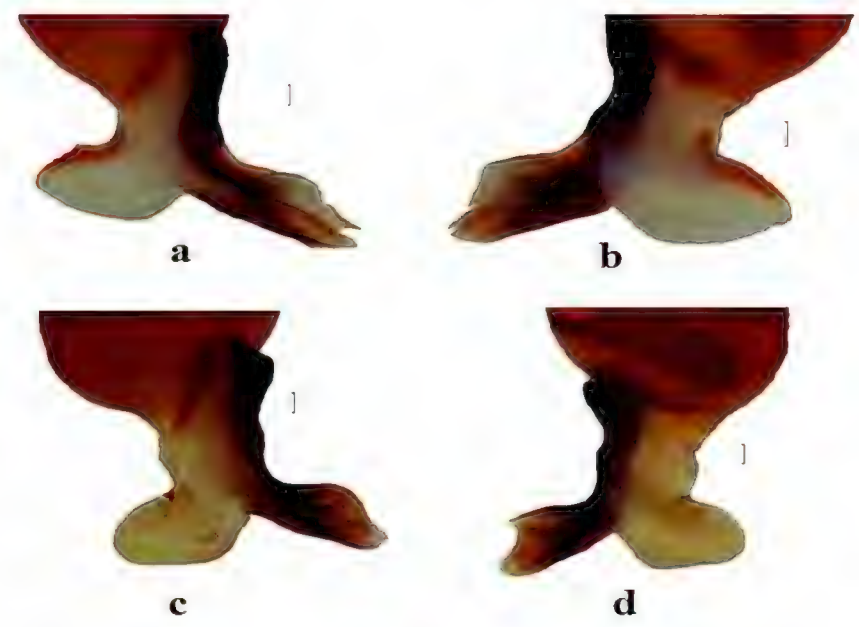

Fig. 2. *Dysdera krisis* a-b. *D. dunini* c-d. Bulbus, dorsal view a, c. ventral view b, d. (Scale: 0.04).

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A new record of genus *Pholcus* from Turkey (Araneae: Pholcidae)

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Abstract

Pholcus crassipalpis Spassky, 1937 is identified as a new record for the Turkish araneofauna. Its morphology is briefly described and illustrated.

Keywords: Araneae, Pholcidae, *Pholcus*, new record, Turkey.

Introduction

Pholcidae is currently represented by 1611 species belonging to 80 genera in the world (World Spider Catalog, 2017). There are 17 species in 6 pholcid genera listed for Turkey (Demir & Seyyar, 2017). So far, four species belonging to genus *Pholcus* Walckenaer, 1805 have been reported from Turkey (Topçu *et al.*, 2005; Bayram *et al.*, 2017; Demir & Seyyar, 2017): *Pholcus opilionoides* (Schrank, 1781), *Pholcus phalangioides* (Fuesslin, 1775), *Pholcus spasskyi* Brignoli, 1978 and *Pholcus turcicus* Wunderlich, 1980. *Pholcus spasskyi* and *Pholcus turcicus* are only known from Turkey. In this study, *Pholcus crassipalpis* Spassky, 1937 is recorded for the first time from Turkey. Therefore, the known species of genus *Pholcus* is raised to 5 in Turkey and the total number of pholcids recorded from Turkey is now 18 species.

Material and Methods

The studied specimen was collected from Central Anatolian Region (Karaman). It was found under stone and preserved in 70% ethanol and deposited in the Arachnology Museum of Niğde Ömer Halisdemir University (NOHUAM). SZX16 Olympus binocular stereomicroscope was used during identification. All measurements are in millimetres. Identification depended on Kovblyuk & Nadolny (2011). World distribution of the new record follows the World Spider Catalog (2017).

Results

Pholcus crassipalpis Spassky, 1937

Material examined: Karaman province, Merkez District, Medreselik Village (36°94'18"N, 33°28'23"E), 20.04.2007, 1♂.

Description: Male: Total body length 3.0 mm (Fig. 1A); carapace length 0.9 mm, width 0.8 mm; leg I length 15.4 mm (4.1+0.2+4.1+5.9+1.1); procursus length 0.9 mm; body colouration pale dirty white without dorsal patterns; legs pale white; chelicerae with frontal and lateral apophyses (Fig. 1B); pedipalp as in Figs. (1C, 1D).

World distribution: Russia, Ukraine, Kazakhstan (World Spider Catalog, 2017).

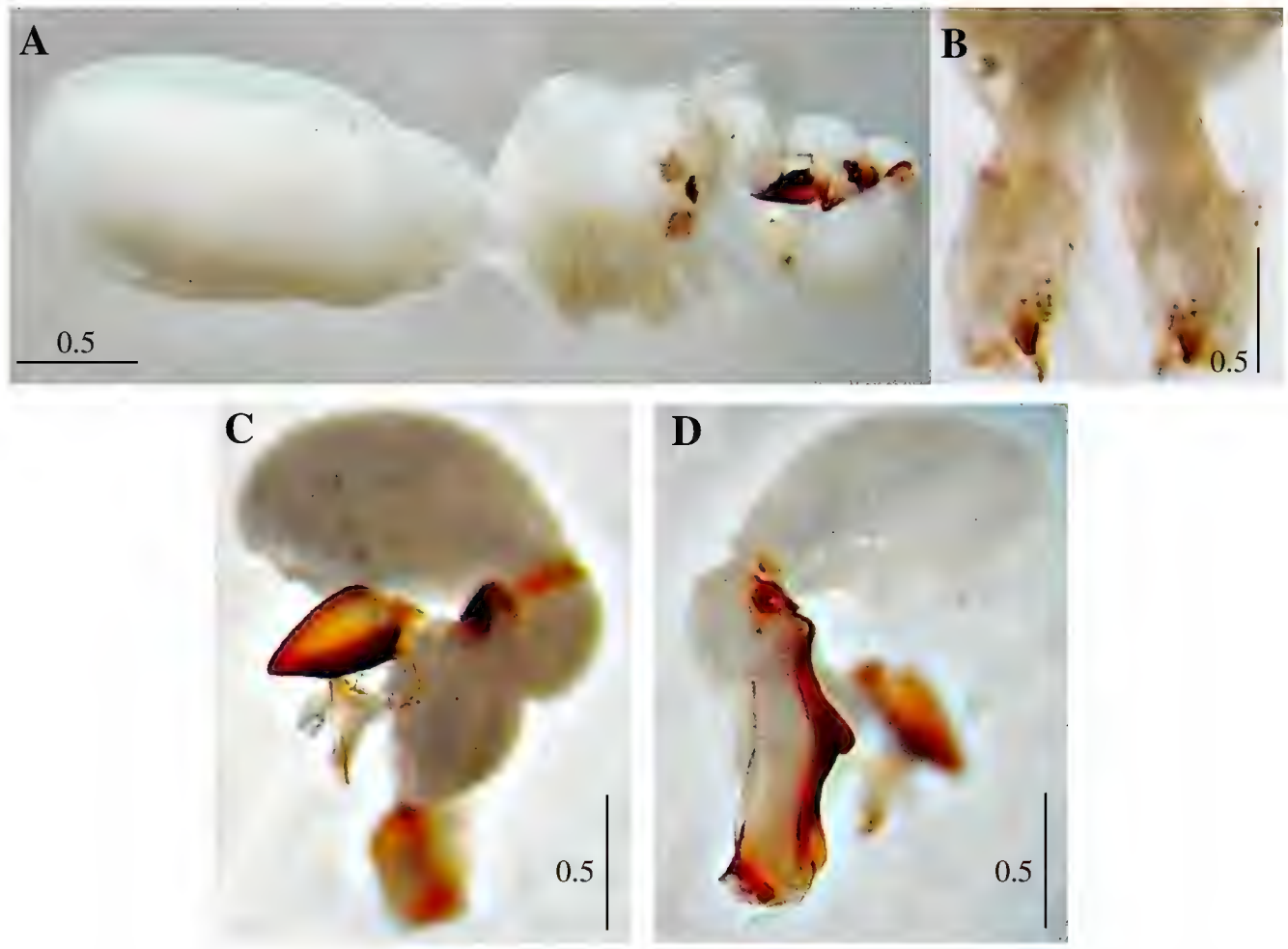

Fig. 1. *Pholcus crassipalpis* Spassky, 1937 ♂. A. Habitus, dorsal view B. Chelicerae, frontal view. C-D. Left palp. C. prolateral view. D. retrolateral view. Scale bars: 0.5 mm.

Acknowledgment

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Inventory of scorpions in three different biotopes in the region of Khenchela, northeast of Algeria

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Abstract

Scorpions are among the most important arthropods in nature because of their medical importance (scorpionic envenoming problem) and their role in the ecosystem. This original study is based on the enumeration of scorpion species and their distribution in the region of Khenchela (north-eastern Algeria). Indeed, a random collection of individuals was carried out once per month in three totally different biotopes (mountain, urban and steppe). Over a twelve-month period (from March 2015 to February 2016), 100 adult scorpions were caught. These individuals belong to two families (Buthidae and Scorpionidae) and represent five species; the most abundant was *Buthus tunetanus* with 28% of the samples collected.

Keywords: Buthidae, Scorpionidae, *Buthus tunetanus*, *Androctonus bicolor*, Algeria.

Introduction

Scorpions are part of class Arachnida. They are grouped into 17 families and more than 2300 species (The Scorpion Files, 2017). Scorpion systematics are based almost entirely on characteristics of external morphology (Vachon, 1952). The body of a scorpion is clearly divided into three parts: the prosoma or cephalothorax, the mesosoma or preabdomen and the metasoma or postabdomen or tail (Grasse, 1949). The venomous apparatus is located in the last segment of the post-abdomen (Goyffon & Chippaux, 1990). Scorpions are nocturnal or diurnal, predatory animals that feed on a variety of insects, spiders, centipedes, and other scorpions (Gouge & Olson, 2001).

Scorpions are considered a public health problem. Of the described species of scorpions in the world, 25 are known for their ability to cause human fatalities (Polis, 1990; Leeming, 2003). Worldwide, the estimated annual number of scorpion bites is 1.2 million with 3.250 deaths (Chippaux & Goyffon, 2008). In Algeria, scorpion bites caused the death of 608 people between 2002 and 2010 (INSP, 2011).

The Khenchela region (northeast of Algeria) is characterized by climatic conditions that allow the existence and the development of scorpions. Nevertheless, studies of these arthropods living in this region are almost absent. Therefore, the objective of this study is to compile a list of species found in different biotopes over a period of one year.

Material and Methods

The field study was conducted between March 2015 and February 2016 in the Khenchela region in north-eastern Algeria (Fig. 1). Three biotopes were considered: mountain, urban, and steppe (Fig. 2).

The collecting of individuals was randomly done at a monthly frequency in the selected biotopes for study. Scorpions are collected from various micro-habitats such as under rocks.

Species determination was performed using a key described by Vachon (1952), based on morphological characteristics. This identification was confirmed by Mr. Sadine Salah Eddine (University of Ghardaia - Algeria).

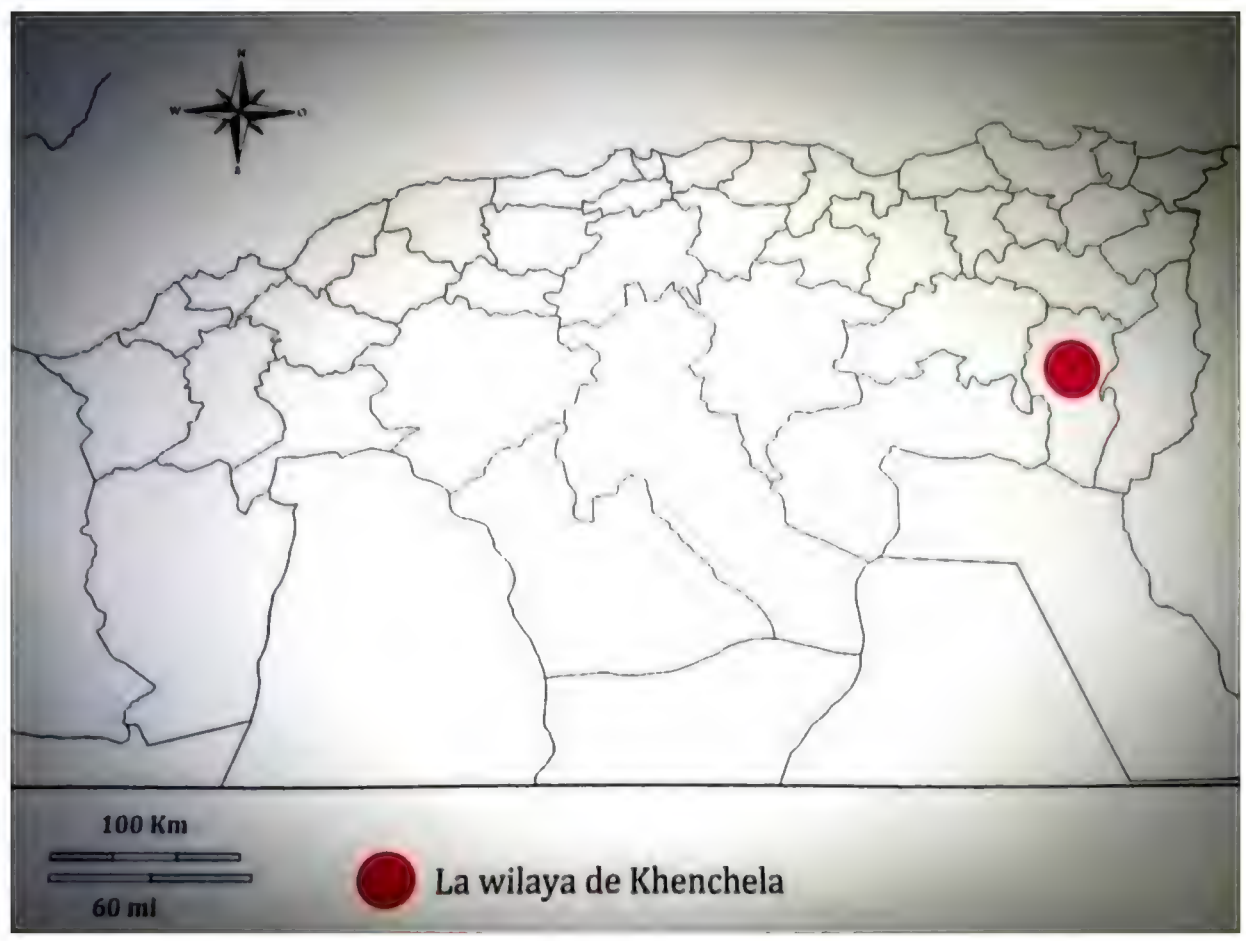

Fig. 1. Location map of the region of Khenchela, Algeria.

Results and Discussion

After sampling over 12 months, 100 adults were collected. These individuals represent four species belonging to family Buthidae (genus *Androctonus* and *Buthus*), and one species (*Scorpio maurus* Linnaeus, 1758) of family Scorpionidae. Both species of the genus *Buthus* encompass half of the identified scorpions (Fig. 3).

The list of species determined is as follows:

Androctonus australis (Linnaeus, 1758)

It is among the most dangerous species of scorpions in North Africa (Goyffon & Billiald, 2007). It is a big species that can measure more than 10 cm, easily recognizable

a

b

c

Fig. 2. The biotopes studied in the Khenchela region.
a. Steppe zone, b. Mountain, c. Urban environment.

by its thickest tail (Fig. 4), of straw yellow colour with parts of the body more or less darkened according to age (Vachon, 1952). This species occupies a vast territory in North-Saharan Africa, from Algeria to Egypt. It invades almost all the regions of the high plateaus and the south Saharan (Chippaux & Goyffon, 2008).

In this study, *A. australis* was found mainly in the urban area (18 individuals) but rarely in the steppe zone (one individual captured) and the mountain (three individuals collected).

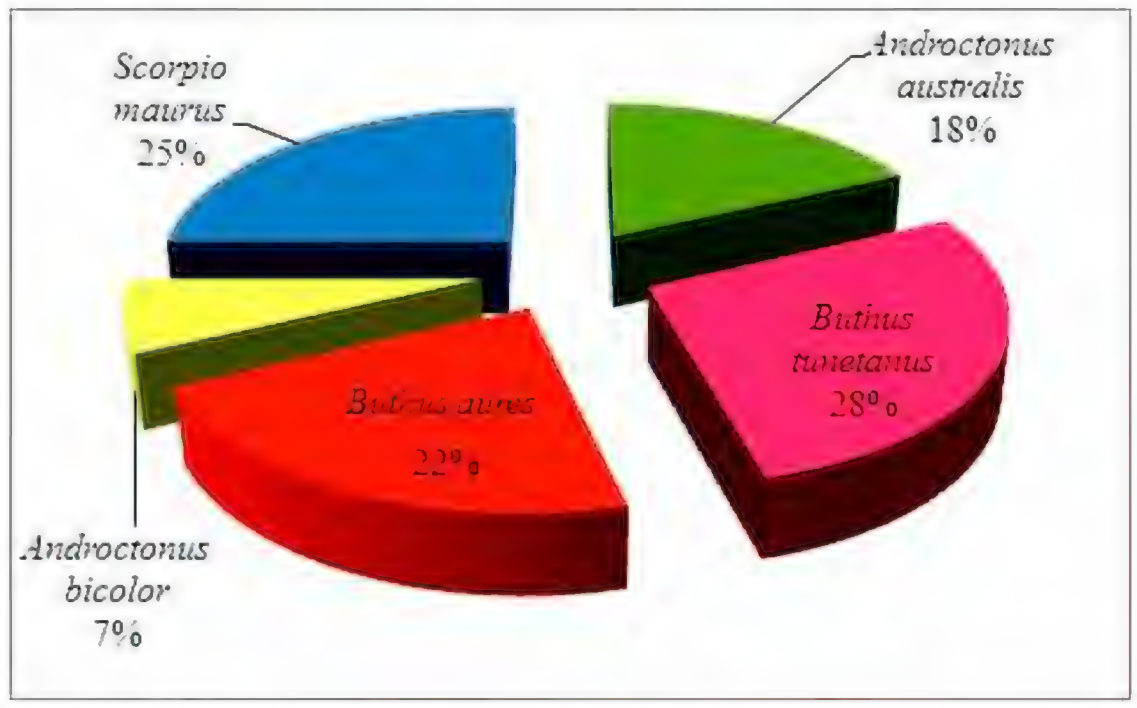

Fig. 3. Percentage of each of the scorpion species collected in the three biotopes of the Khenchela region.

Fig. 4. Adult of *Androctonus australis*.

Androctonus bicolor Ehrenberg, 1828

Scorpion of 7 to 8 cm in length. Dark brown to black in colour (Fig. 5), with the tip of ambulatory legs and claws lighter (Sadine *et al.*, 2011). This black scorpion is known from North Africa, still in low density (Goyffon *et al.*, 1982). It is reported in Algeria, in Egypt, in Eritrea and in the Middle East. In Algeria, it is present in the central horizontal strip of Tebessa and Khenchela in the East, as far as Naama in the West (Vachon, 1952). In addition, this species has recently been identified in the Belezma Park in north-eastern Algeria (Sadine *et al.*, 2012) and in the Ghardaia region (Sadine *et al.*, 2014).

A. bicolor was the only black scorpion found in the Khenchela region, specifically in the steppe area. Individuals belonging to this species were very rare during our investigation. Only seven individuals were identified.

Fig. 5. *Androctonus bicolor.*

Buthus aures Lourenço & Sadine, 2016

It is a new species belonging to the family of Buthidae, identified in Algeria by Lourenço and Sadine in 2016 in the region of Batna. It is a scorpion mainly of yellow to orange-yellowish colour (Fig. 6), which can reach a total length of 61 mm for males (Lourenço & Sadine, 2016).

In our study, *B. aures* was among the most frequent species. It is caught precisely in the mountain (14 individuals) and the steppe zone (7 individuals).

Buthus tunetanus (Herbst, 1800)

Scorpion of medium size and of straw yellow colour (Fig. 7) with a darker abdomen but without well-marked lateral bands (Vachon, 1952).

B. tunetanus was the most frequent species in our study, with 28% of the individuals caught. It was very widespread in the steppe zone (11 individuals), as well as the mountain (9 individuals). However, it was rarely found in the urban area (two individuals only).

Vachon (1952) reported the presence of this scorpion in Algeria and Tunisia. The recordings for Egypt are doubtful (Levy & Amitai, 1980; Lourenço *et al*., 2010).

Fig. 6. *Buthus aures*.

Fig. 7. Adult of *Buthus tunetanus*.

Scorpio maurus Linnaeus, 1758

Light brown to reddish-brown scorpion (Fig. 8). It has strong pedicpalpes and a cephalothorax with a bilobed front (Vachon, 1952).

This species was detected in the three investigated biotopes, particularly in the steppe zone and the mountain. All collected adult specimens of *S. maurus* species did not exceed 8 cm in length.

According to Vachon (1952), *S. maurus* of North Africa has a localized altitudinal distribution (900 to 1100 m altitude). In Algeria, it has been reported in the altitudes of the Batna region (Sadine *et al*., 2012) and in the Souf region (Sadine *et al*., 2011).

Fig. 8. *Scorpio maurus*.

Conclusion

At the end of this investigation, 100 adults were collected in the three biotopes: steppe zone, mountain and urban environment. In total, five species were identified: *Buthus aures*, *B. tunetanus* which is the most frequent species, *Androctonus australis*, *A. bicolor* which is the only black scorpion identified and *Scorpio maurus*.

Our work is an original preliminary contribution in determining the diversity of scorpions in the region of Khenchela. Nevertheless, other studies would be interesting to know better the scorpions of this region, considering other biotopes and focusing on the bio-ecological characteristics of the most dangerous species.

Acknowledgments

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A list of Egyptian spiders (revised in 2017)

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This list includes names of spider species, recorded from Egypt, with their distribution localities. It is preceded by a table which includes names of recorded spider families (41) followed by number of recorded genera (204) and species (405) within parentheses. A few species maybe considered *nomina dubia* and some records are not certain. The verification and corrigenda will be available in a detailed work revising different spider families of Egypt. This work is a trial to bring the author's "Annotated checklist of Egyptian spider species" of 1990 and "A list of Egyptian spiders (revised in 2002) and 2006" to be up to date. The recorded localities are plotted on a map. [Abbreviations used: ? = unknown locality (only Egypt), * = Endemic species, Prot. = Protectorate]

Keywords: Spiders, Araneae, Egypt.

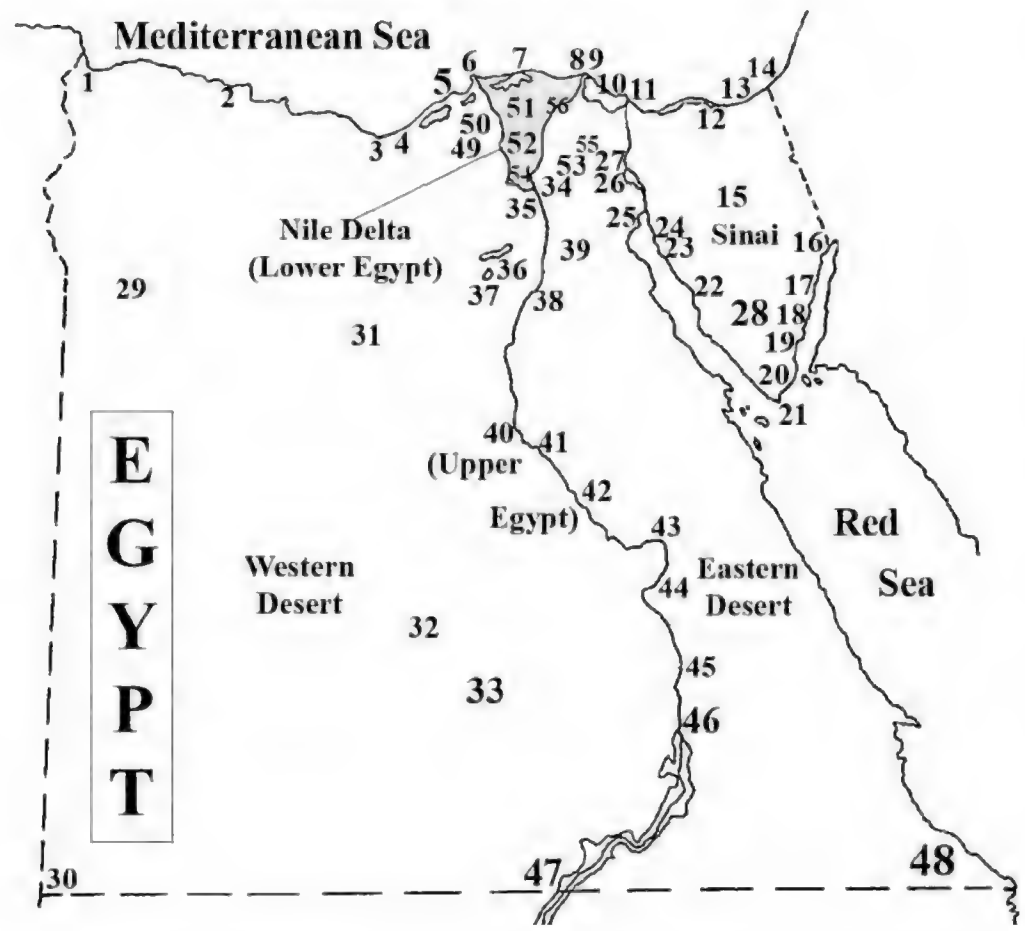
Order Araneae (Aranei, Araneida)
Suborder Opisthothelae
Infraorder Mygalomorphae

Nemesiidae	1 (1)	Theraphosidae	1 (2)		

Infraorder Araneomorphae

Agelenidae	4 (7)	Linyphiidae	11 (11)	Scytodidae	1 (6)
Araneidae	14 (21)	Liocranidae	1 (2)	Segestriidae	2 (2)
Cithaeronidae	1 (1)	Lycosidae	18 (44)	Selenopidae	1 (1)
Clubionidae	1 (1)	Mimetidae	2 (2)	Sicariidae	1 (1)
Corinnidae	1 (1)	Oecobiidae	2 (7)	Sparassidae	6 (13)
Ctenidae	1 (1)	Oonopidae	7 (9)	Synaphridae	1 (1)
Dictynidae	5 (6)	Oxyopidae	2 (7)	Tetragnathidae	2 (5)
Dysderidae	1 (7)	Palpimanidae	1 (3)	Theridiidae	14 (29)
Eresidae	4 (6)	Philodromidae	6 (20)	Thomisidae	10 (25)
Eutichuridae	2 (9)	Pholcidae	6 (7)	Titanoecidae	2 (2)
Filistatidae	3 (4)	Pisauridae	4 (4)	Trachelidae	1(1)
Gnaphosidae	20 (47)	Prodidomidae	3 (3)	Uloboridae	1 (2)
Hersiliidae	2 (2)	Salticidae	33 (74)	Zodariidae	5 (8)

TOTAL : 41 Families, 204 genera, 405 species



Map of Egypt
1-56. Recording localities.

1- El-Salloum. 2- Marsa Matruh. 3- El-Omayed Prot. 4- El-Hammam. 5- Alexandria, Edko, Mariout. 6- Rosetta. 7- El-Burullus Prot. 8- Ras El-Barr. 9- Damietta. 10- El-Manzalah (lake) & Ashtoum El-Gamil. 11- Port Said. 12- El-Zaranik Prot. 13- El-Arish. 14- Rafah. 15- Mid Sinai. 16- Taba. 17- Abu Galoum Prot. 18- Dahab and Wadi Yah'med. 19- Nabq Prot. 20- Sharm El-Sheikh. 21- Ras Mohammed Prot. 22- En Higiya (north east of Abu Zneima). 23- Ras Sedr. 24- Ain-Musa. 25- Suez. 26- Fayed. 27- Ismailia. 28- St. Catherine, Mount Serbal, Wadi Esla. 29- Siwa Oasis. 30- El-Uwaynat. 31- El-Baharia Oases, El-Bawitti. 32- Dakhla Oases. 33- New Valley. 34- Cairo (Heliopolis, Zenhum and Helwan), Wadi Degla (El-Maadi). 35- El-Giza, Pyramids, Saqqarah, Dahshur. 36- El-Fayum, Kom Osheem. 37- Wadi El-Raiyan. 38- Beni Suef. 39- Wadi Rishrash. 40- Manfalut. 41- Assiut. 42- Sohag. 43- Qena. 44- Luxor. 45- Gebel Silsilis. 46- Aswan, Elephantine and Philoe island; Fatira (Kom Ombo). 47- Wadi Halfa, Nubia. 48- Elba Prot. (El-Shalateen, Bir El-Gahliya). 49- Wadi Natron. 50- El-Tahrir Province, Badr district (Beheira), Sadat City. 51- Tanta & Kafr El-Sheikh. 52- El-Menoufeia (Shebin El-Kom). 53- El-Aasher-Min-Ramadan City (65 km east of Cairo)[& Fakous]. 54- Nile Barrage, Qalyubia. 55- Salahyeh & Zagazig. 56- El-Mansoura.

Infraorder Mygalomorphae

Family Nemesiidae Simon, 1889
Nemesia cellicola Savigny, 1825 --- Alexandria

Family Theraphosidae Thorell, 1869
Chaetopelma concolor (Simon 1873) --- El-Giza
Chaetopelma olivaceum (C.L. Koch, 1841) --- Alexandria, Cairo, El-Fayum, El-Mansoura, Thebes (Luxor), Tor (southern Sinai), Upper Egypt

Infraorder Araneomorphae

Family Agelenidae C.L. Koch, 1837
Benoitia lepida (O. Pickard-Cambridge, 1876) --- Abu Galoum, Elba Prot., El-Omayed, El-Zaranik, Ismailia, New Valley, Qena, Siwa Oasis, Upper Egypt, Wadi El-Raiyan, Wadi Natron
Benoitia timida (Savigny, 1825) --- Rosetta, Sinai
Lycosoides coarctata (Dufour, 1831) --- Alexandria, Assiut, Nile Barrage
Tegenaria domestica (Clerck, 1757) --- Badr district, Rosetta
Tegenaria pagana C.L. Koch, 1840 --- Cairo
Tegenaria parietina (Fourcroy, 1785) --- Alexandria, Badr district
Textrix caudata L. Koch, 1872 --- ?

Family Araneidae Clerck, 1757
Agalenatea redii (Scopoli, 1763) --- southern Sinai
Araneus circe (Savigny, 1825) --- Alexandria
Argiope bruennichi (Scopoli, 1772) --- ?
Argiope lobata (Pallas, 1772) --- Alexandria, Cairo, El-Burullus, El-Zaranik, Nabq, Ras Mohammed, St. Catherine, Wadi El-Raiyan
Argiope sector (Forskål, 1776) --- Nubia, Port Said, Siwa Oasis, Upper Egypt, Wadi Natron
Argiope trifasciata (Forskål, 1775) --- Alexandria, Badr district, Cairo, El-Burullus, El-Tahrir Province, Qena, Siwa Oasis, Wadi El-Raiyan, Wadi Natron
Cyclosa deserticola Levy, 1998 --- Sinai (north of Naqeb)
Cyclosa insulana (Costa, 1834) --- El-Burullus (?), Siwa Oasis, Wadi Natron
Cyrtophora citricola (Forskål, 1775) --- Cairo, Abu Galoum, Assiut, El-Giza, El-Menoufeia, Ismailia, Nabq, Qena, Ras Mohammed, Sadat City, Siwa Oasis, Wadi El-Raiyan, Wadi Natron
Gasteracantha sanguinolenta rueppelli (Strand, 1916) --- ? *
Gibbaranea bituberculata (Walckenaer, 1802) --- Alexandria, Cairo
Hypsosinga albovittata (Westring, 1851) --- Alexandria
Larinia acuticauda Simon, 1906 --- Luxor, Siwa Oasis
Larinia chloris (Savigny, 1825) --- Ismailia, Siwa Oasis, Suez, Upper Egypt
Larinioides cornutus (Clerck, 1757) --- Ismailia, Rosetta
Larinioides suspicax (O. Pickard-Cambridge, 1876) --- Alexandria, Damietta, El-Fayum, Rosetta, Siwa Oasis, Wadi Natron
Neoscona subfusca (C.L. Koch, 1837) --- Alexandria, Siwa Oasis
Nuctenea umbratica (Clerck, 1757) --- Damietta
Singa lucina (Savigny, 1825) --- Alexandria, Rosetta
Singa semiatra L. Koch, 1867 --- ?
Siwa atomaria (O. Pickard-Cambridge, 1876) --- Aswan, Cairo, Siwa Oasis, Upper Egypt

Family Cithaeronidae Simon, 1893
Cithaeron praedonius O. Pickard-Cambridge, 1872 --- Alexandria

Family Clubionidae Wagner, 1887
Clubiona listeri Audouin, 1825 --- ? *

Family Corinnidae Karsch, 1880
Castianeira antinorii (Pavesi, 1880) --- El-Menoufeia, El-Giza, Ismailia, Sadat City, Siwa Oasis

Family Ctenidae Keyserling, 1877
Anahita pallida (L. Koch, 1875) --- ?

Family Dictynidae O. Pickard-Cambridge, 1871
Archaeodictyna anguiniceps (Simon, 1899) --- New Valley, Siwa Oasis, Wadi Natron
Archaeodictyna condocta (O. Pickard-Cambridge, 1876) --- Alexandria, Cairo, Lower Egypt, Suez
Brigittea innocens (O. Pickard-Cambridge, 1872) --- Cairo
Devade indistincta (O. Pickard-Cambridge, 1872) --- Mariout, Siwa Oasis, Suez
Lathys humilis meridionalis (Simon, 1874) --- Alexandria

Nigma conducens O. Pickard-Cambridge, 1876 --- Cairo, El-Giza, Lower Egypt, Elephantine, Philoe island (Aswan), Wadi-Halfa

Family Dysderidae C.L. Koch, 1837
Dysdera crocata C.L. Koch, 1838 --- Alexandria, Assiut, El-Menoufeia, Ismailia
Dysdera erythrina (Walckenaer, 1802) --- ?
Dysdera lata Reuss, 1834 --- Alexandria, Cairo
Dysdera lubrica Simon, 1907 --- Alexandria, Cairo *
Dysdera pharaonis Simon, 1907 --- Alexandria, Mariout *
Dysdera subnubila Simon, 1907 --- Alexandria, Cairo
Dysdera westringi O. Pickard-Cambridge, 1872 --- Alexandria

Family Eresidae C.L. Koch, 1851
Dorceus quadrispilotus Simon, 1908 --- Alexandria, Mariout, west of El-Hammam *
Eresus pharaonis Walckenaer, 1837 --- ? *
Loureedia annulipes (Lucas, 1857) --- Alexandria, Mariout, Suez
Stegodyphus dufouri (Audouin, 1825) --- Abu Galoum, Alexandria, Assiut, Aswan, Beni Suef, Cairo, Damietta, El-Baharia Oases, El-Fayum, El-Giza, El-Menoufeia, Ismailia, Luxor, Nile Barrage, Nile Delta, Port Said, Qena, Sadat City, Sinai, Siwa Oasis, Sohag, Suez, Tanta, Wadi El-Raiyan, Wadi Halfa, Wadi Natron
Stegodyphus lineatus (Latreille, 1817) --- Alexandria, Cairo, Damietta, Elba Prot. (El-Shalateen, Bir El-Gahliya), El-Burullus, El-Zaranik, Nabq, Ras El-Barr, Siwa Oasis, southern Sinai, Suez
Stegodyphus manicatus Simon, 1876 --- Cairo

Family Eutichuridae Lehtinen, 1967
Cheiracanthium annulipes O. Pickard-Cambridge, 1872 --- Cairo, Philoe island (Aswan), Wadi Natron
Cheiracanthium canariense Wunderlich, 1987 --- El-Burullus, El-Zaranik
Cheiracanthium equestre O. Pickard-Cambridge, 1874 --- Cairo, Siwa Oasis
Cheiracanthium isiacum O. Pickard-Cambridge, 1874 --- Cairo, Badr district, El-Fayum, El-Giza, El-Menoufeia, Ismailia, Nile Delta, Qena, Sadat City, Siwa Oasis, Sohag, Wadi Natron
Cheiracanthium jovium Denis, 1947 --- Siwa Oasis *
Cheiracanthium mildei L. Koch, 1864 --- Ismailia, southern Sinai
Cheiracanthium pelasgicum (C.L. Koch, 1837) --- Beni Suef, Elba Prot., Qalyubia, Rafah
Cheiracanthium siwi El-Hennawy, 2001 --- Assiut, Qena, Sadat City, Siwa Oasis *
Cheiramiona dubia (O. Pickard-Cambridge, 1874) --- Alexandria, Ismailia *

Family Filistatidae Ausserer, 1867
Filistata insidiatrix (Forskål, 1775) --- Alexandria, Assiut, Cairo, El-Giza, El-Menoufeia, Lower Egypt, Sadat City, Sinai, Siwa Oasis
Filistata puta O. Pickard-Cambridge, 1876 --- Alexandria
Sahastata nigra (Simon, 1897) --- Cairo, Luxor, Suez
Zaitunia schmitzi (Kulczyński, 1911) --- Sinai (Mt. Catarina)

Family Gnaphosidae Pocock, 1898
Aphantaulax albini (Audouin, 1825) --- ?
Aphantaulax cincta (L. Koch, 1866) --- Alexandria

Berlandina plumalis (O. Pickard-Cambridge, 1872) --- Alexandria, Cairo
Berlandina venatrix (O. Pickard-Cambridge, 1874) --- Alexandria, Assiut, Aswan, Cairo, Luxor, Sinai, Siwa Oasis, Wadi Halfa
Drassodes lutescens (C.L. Koch, 1839) --- Alexandria *
Drassodes unicolor (O. Pickard-Cambridge, 1872) --- ?
Haplodrassus dalmatensis (L. Koch, 1866) --- Cairo, Ismailia
Haplodrassus pugnans (Simon, 1880) --- El-Arish
Heser infumatus (O. Pickard-Cambridge, 1872) --- Cairo
Heser nilicola (O. Pickard-Cambridge, 1874) --- Alexandria, Ashtoum El-Gamil, Badr district, Cairo, El-Giza, El-Menoufeia, El-Tahrir Province, Nile Delta, Sadat City
Leptopilos pupa (Dalmas, 1919) --- Suez *
Megamyrmaekion caudatum Reuss, 1834 --- Ismailia
Megamyrmaekion vulpinum (O. Pickard-Cambridge, 1874) --- Aswan, Cairo
Micaria dives (Lucas, 1846) --- El-Fayum, El-Menoufeia, Ismailia, Sadat City
Micaria ignea (O. Pickard-Cambridge, 1872) --- northern and southern (?) Sinai
Minosia pharao Dalmas, 1921 --- Alexandria, Cairo *
Minosiella mediocris Dalmas, 1921 --- Cairo, El-Fayum, Siwa Oasis, Suez
Minosiella pharia Dalmas, 1921 --- Cairo
Nomisia aussereri (L. Koch, 1872) --- Alexandria, Cairo
Nomisia recepta (Pavesi, 1880) --- ?
Odontodrassus aravaensis Levy, 1999 --- Ismailia [Figs. 1-3] NEW RECORD
Odontodrassus mundulus (O. Pickard-Cambridge, 1872) --- Cairo, southern Sinai
Poecilochroa pugnax (O. Pickard-Cambridge, 1874) --- Alexandria, Assiut, Badr district, Cairo, El-Menoufeia, Ismailia, Sadat City, Siwa Oasis, Suez
Poecilochroa senilis (O. Pickard-Cambridge, 1872) --- Alexandria, El-Omayed
Pterotricha conspersa (O. Pickard-Cambridge, 1872) --- Cairo (Helwan), El-Giza (Pyramids), El-Burullus, Elba Prot., El-Menoufeia, Ismailia, Ras Mohammed, Siwa Oasis
Pterotricha dalmasi Fage, 1929 --- Elba Prot., Nabq, Siwa Oasis
Pterotricha lentiginosa (C.L. Koch, 1837) --- ?
Pterotricha lesserti Dalmas, 1921 --- El-Arish, El-Zaranik, Rafah, Ras Sedr
Pterotricha linnaei (Audouin, 1825) --- ? *
Pterotricha procera (O. Pickard-Cambridge, 1874) --- Alexandria, Cairo
Pterotricha schaefferi (Audouin, 1825) --- Alexandria, Aswan, Cairo, El-Omayed, Suez, Wadi El-Raiyan, Wadi Halfa
Setaphis mollis (O. Pickard-Cambridge, 1874) --- Alexandria
Setaphis subtilis (Simon, 1897) --- Ashtoum El-Gamil, Assiut, Badr district, Cairo, El-Menoufeia, Ismailia, Nile Delta, Ras El-Barr, Sadat City, Shebin El-Kom, Sohag, southern Sinai, Wadi El-Raiyan
Synaphosus gracillimus (O. Pickard-Cambridge, 1872) --- Sinai (En Higiya [NE of Abu Zneima], Mount Serbal), Wadi Degla, Wadi Rishrash
Synaphosus intricatus (Denis, 1947) --- Siwa Oasis
Synaphosus minimus (Caporiacco, 1936) --- El-Uwaynat, Sinai (Dahab, Wadi Yah'med)
Synaphosus syntheticus (Chamberlin, 1924) --- Cairo, Ismailia, Sadat City, Sohag
Talanites fervidus Simon, 1893 --- Cairo, Suez
Talanites ornatus (O. Pickard-Cambridge, 1874) --- Alexandria *
Trachyzelotes jaxartensis (Kroneberg, 1875) --- Assiut, El-Fayum, Badr district, El-Menoufeia, Ismailia, Luxor
Trachyzelotes lyonneti (Audouin, 1825) --- Ismailia, Qena

Urozelotes rusticus (L. Koch, 1872) --- Marsa Matruh, Siwa Oasis
Zelotes fagei Denis, 1955 --- southern Sinai
Zelotes laetus (O. Pickard-Cambridge, 1872) --- Alexandria, Assiut, Badr district, Cairo, Elba Prot., El-Fayum, Lower Egypt
Zelotes listeri (Audouin, 1825) --- southern Sinai *
Zelotes scrutatus (O. Pickard-Cambridge, 1872) --- Alexandria, Siwa Oasis *
Zelotes tenuis (L. Koch, 1866) --- Alexandria, El-Menoufeia, Sadat City

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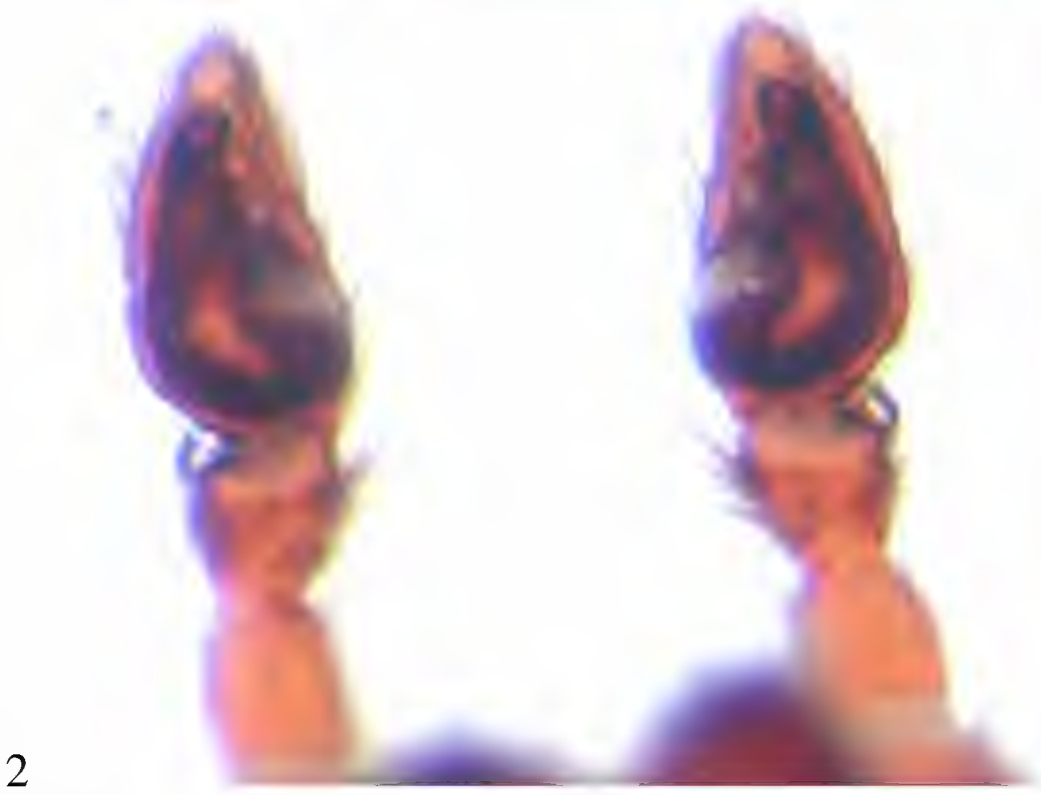

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Figs. 1-3. *Odontodrassus aravaensis* Levy, 1999 ♂, from Ismailia.
1. Habitus, dorsal view. 2. Pedipalps, ventral view. 3. Idem, left palp of another specimen. Note the unique shape of the tibial retrolateral apophysis.

Family Hersiliidae Thorell, 1870
Hersilia caudata Savigny, 1825 --- Cairo to Aswan, Ismailia, Qena, Sadat City, Sohag
Hersiliola simoni (O. Pickard-Cambridge, 1872) --- Alexandria

Family Linyphiidae Blackwall, 1859
Agyneta rurestris (C.L. Koch, 1836) --- Alexandria
Brachycerasphora parvicornis (Simon, 1884) --- Alexandria *
Erigone dentipalpis (Wider, 1834) --- Badr district, Cairo, El-Aasher-Min-Ramadan City, El-Fayum, El-Menoufeia, Ismailia, Nile Delta, Qena, Sadat City
Gnathonarium dentatum (Wider, 1834) --- Ashtoum El-Gamil, Badr district, El-Menoufeia, Ismailia, Nile Delta, Sadat City
Gnathonarium dentatum orientale (O. Pickard-Cambridge, 1872) --- ?
Mermessus denticulatus (Banks, 1898) --- Assiut, Badr district, Cairo, El-Fayum, El-Menoufeia, Ismailia, Sadat City
Microctenonyx subitaneus (O. Pickard-Cambridge, 1875) --- Alexandria
Ostearius melanopygius (O. Pickard-Cambridge, 1880) --- Sadat City, Badr district (Beheira), El-Menoufeia, Sadat City
Pelecopsis inedita (O. Pickard-Cambridge) --- Alexandria, Ismailia
Prinerigone vagans (Savigny, 1825) --- Alexandria, Assiut, Badr district, Cairo, El-Fayum, El-Menoufeia, New Valley, Nile Delta, Sadat City, Wadi Natron
Sengletus extricatus (O. Pickard-Cambridge, 1876) --- Alexandria, Assiut, Badr district, Cairo, El-Fayum, El-Menoufeia, Sadat City
Silometopus curtus (Simon, 1881) --- ?

Family Liocranidae Simon, 1897
Mesiotelus alexandrinus (Simon, 1880) --- Edko *
Mesiotelus tenuissimus (L. Koch, 1866) --- Alexandria, Ashtoum El-Gamil, Assiut, Badr district, El-Menoufeia, Ismailia, Sadat City, southern Sinai

Family Lycosidae Sundevall, 1833
Allocosa deserticola (Simon, 1898) --- Saqqarah *
Allocosa tarentulina (Savigny, 1825) --- Alexandria
Allocosa tremens (O. Pickard-Cambridge, 1876) --- Alexandria
Alopecosa pelusiaca (Savigny, 1825) --- El-Manzalah
Arctosa ambigua (Denis, 1947) --- Siwa Oasis *
Arctosa cinerea (Fabricius, 1777) --- Siwa Oasis, southern Sinai, Upper Egypt, Wadi Natron
Arctosa depuncta (O. Pickard-Cambridge, 1876) --- Alexandria
Arctosa leopardus (Sundevall, 1833) --- Alexandria
Arctosa quadripunctata (Lucas, 1846) --- Siwa Oasis
Aulonia albimana (Walckenaer, 1805) --- ? *
Crocodilosa virulenta (O. Pickard-Cambridge, 1876) --- Cairo *
Evippa arenaria (Savigny, 1825) --- Rosetta
Evippa praelongipes (O. Pickard-Cambridge, 1870) --- southern Sinai
Evippa ungulata (O. Pickard-Cambridge, 1876) --- Aswan, Luxor, Siwa Oasis, Upper Egypt, Wadi El-Raiyan
Evippomma simoni Alderweireldt, 1992 --- Wadi Halfa
Hippasa innesi Simon, 1889 --- Cairo, Suez *
Hippasa partita (O. Pickard-Cambridge, 1876) --- Alexandria

Hippasa sinai Alderweireldt & Jocqué, 2005 --- Sinai
Hogna alexandria Roewer, 1960 --- Alexandria *
Hogna ferox (Lucas, 1838) --- Ashtoum El-Gamil, Assiut, Badr district, El-Fayum, El-Giza, Ismailia, Nile Delta, Sadat City, Siwa Oasis, Wadi Natron
Hogna peregrina (Savigny, 1825) --- Rosetta *
Hogna radiata (Latreille, 1817) --- Cairo
Hogna sinaia Roewer, 1959 --- Sinai
Hogna truculenta (O. Pickard-Cambridge, 1876) --- Alexandria
Hyaenosa effera (O. Pickard-Cambridge, 1872) --- Alexandria, Cairo
Lycosa cingara (C.L. Koch, 1847) --- ? *
Lycosa cretacea Simon, 1898 --- Saqqarah
Lycosa nilotica Savigny, 1825 --- Alexandria, Aswan, Cairo *
Lycosa tarantula (Linnaeus, 1758) --- southern Sinai
Megarctosa argentata (Denis, 1947) --- Siwa Oasis *
Ocyale atalanta Savigny, 1825 --- Wadi Natron
Ocyale pelliona (Savigny, 1825) --- Rosetta
Orinocosa priesneri Roewer, 1959 --- Djebel Bokas (?) *
Pardosa iniqua (O. Pickard-Cambridge, 1876) --- Alexandria *
Pardosa injucunda (O. Pickard-Cambridge, 1876) --- Alexandria, Cairo, El-Menoufeia, Siwa Oasis
Pardosa inopina (O. Pickard-Cambridge, 1876) --- Alexandria, Wadi Natron
Pardosa inquieta (O. Pickard-Cambridge, 1876) --- Alexandria *
Pardosa naevia (L. Koch, 1875) --- ? *
Pardosa observans (O. Pickard-Cambridge, 1876) --- Alexandria *
Pardosa serena (L. Koch, 1875) --- Cairo *
Pirata proximus O. Pickard-Cambridge, 1876 --- Alexandria *
Trochosa annulipes L. Koch, 1875 --- Cairo
Trochosa urbana O. Pickard-Cambridge, 1876 --- Alexandria, Badr district, El-Fayum, El-Menoufeia, Sadat City, Siwa Oasis
Wadicosa fidelis (O. Pickard-Cambridge, 1872) --- Alexandria, Ashtoum El-Gamil, Assiut, Aswan, Badr district, Cairo, El-Fayum, El-Menoufeia, Ismailia, Qena, Sadat City, Siwa Oasis, Suez, Wadi Natron

Family Mimetidae Simon, 1881
Ero sp. --- El-Menoufeia, Sadat City
Mimetus monticola (Blackwall, 1870) --- Cairo

Family Oecobiidae Blackwall, 1862
Oecobius amboseli Shear & Benoit, 1974 --- Cairo
Oecobius maculatus Simon, 1870 --- El-Giza
Oecobius navus Blackwall, 1859 --- Alexandria, Ashtoum El-Gamil, Badr district, Cairo, El-Giza, El-Menoufeia, Ismailia, Sadat City, Upper Egypt
Oecobius putus O. Pickard-Cambridge, 1876 --- Cairo, Badr district, El-Giza, El-Menoufeia, Ismailia, Qena, Upper Egypt
Oecobius templi O. Pickard-Cambridge, 1876 --- Abu Galoum, Cairo, Ismailia, Sadat City, Upper Egypt
Uroctea durandi (Latreille, 1809) --- ?
Uroctea limbata (C.L. Koch, 1843) --- Alexandria, Abu Galoum, Elba Prot., Nabq, Qena, Ras Mohammed, Sadat City

Family Oonopidae Simon, 1890
Dysderina scutata (O. Pickard-Cambridge, 1876) --- Alexandria, El-Faiyum, El-Menoufeia, Sadat City, Sohag *
Gamasomorpha arabica Simon, 1893 --- Ain-Musa, Ismailia *
Ischnothyreus velox Jackson, 1908 --- Cairo
Opopaea margaritae (Denis, 1947) --- Siwa Oasis *
Opopaea punctata (O. Pickard-Cambridge, 1872) --- Ain-Musa, Alexandria, Cairo, El-Giza
Opopaea santschii Brignoli, 1974 --- El-Salloum
Orchestina pavesii (Simon, 1873) --- El-Faiyum ?
Ovobulbus bokerella Saaristo, 2007 --- Sinai
Sulsula pauper (O. Pickard-Cambridge, 1876) --- Alexandria

Family Oxyopidae Thorell, 1870
Oxyopes globifer Simon, 1876 --- Sinai, Suez
Oxyopes heterophthalmus (Latreille, 1804) --- Alexandria, Cairo, Sinai
Oxyopes lineatus Latreille, 1806 --- ?
Oxyopes sinaiticus Levy, 1999 --- Sinai *
Peucetia arabica Simon, 1882 --- Cairo, Abu Galoum, El-Menoufeia, Nabq, Ras Mohammed, St. Catherine, Elba Prot., Sadat City, Siwa Oasis, Suez
Peucetia virescens (O. Pickard-Cambridge, 1872) --- Dakhla Oases
Peucetia viridis (Blackwall, 1858) --- Dahshur (El-Giza), Sinai (Gebel Musa)

Family Palpimanidae Thorell, 1870
Palpimanus aegyptiacus Kulczyński, 1909 --- ?
Palpimanus gibbulus Dufour, 1820 --- Alexandria, Cairo to Luxor, Nubia
Palpimanus uncatus Kulczyński, 1909 --- ?

Family Philodromidae Thorell, 1870
Halodromus barbarae Muster, 2009 --- Ashtoum El-Gamil, Aswan, Qena
Halodromus patellidens (Levy, 1977) --- Ismailia
Philodromus bigibbus (O. Pickard-Cambridge, 1876) --- Alexandria, Aswan
Philodromus cinereus O. Pickard-Cambridge, 1876 --- Cairo *
Philodromus denisi Levy, 1977 --- Siwa Oasis *
Philodromus lugens (O. Pickard-Cambridge, 1876) --- Alexandria *
Philodromus venustus O. Pickard-Cambridge, 1876 --- Cairo to Manfalut *
Pulchellodromus glaucinus Simon, 1870 --- Assiut, Badr district, Cairo, El-Giza, El-Menoufeia, Ismailia, Sadat City, Siwa Oasis, Upper Egypt
Pulchellodromus pardalis (Muster & Bosmans, 2007) --- Upper Egypt
Rhysodromus fallax (Sundevall, 1833) --- Siwa Oasis *
Rhysodromus lepidus (Blackwall, 1870) --- Aswan, Cairo, Wadi Natron
Rhysodromus sinaiticus (Levy, 1977) --- southern Sinai *
Thanatus albini (Audouin, 1825) --- Badr district, Cairo, Elba Prot., El-Fayum, El-Menoufeia, El-Tahrir Province, Ismailia, New Valley, Nile Delta, Qena, Sadat City, Siwa Oasis, Sohag
Thanatus fabricii (Audouin, 1825) --- Alexandria, Siwa Oasis
Thanatus flavescens O. Pickard-Cambridge, 1876 --- Cairo *
Thanatus flavus O. Pickard-Cambridge, 1876 --- Alexandria *

Thanatus formicinus (Clerck, 1757) --- ?
Thanatus fornicatus Simon, 1897 --- Sinai
Thanatus lesserti (Roewer, 1951) --- Cairo
Tibellus vossioni Simon, 1884 --- Siwa Oasis

Family Pholcidae C.L. Koch, 1850
Artema atlanta Walckenaer, 1837 --- Assiut, Cairo, Elba Prot., El-Giza, El-Menoufeia, Ismailia, Qena, Sadat City, Siwa Oasis, Sohag, Wadi Natron
Crossopriza semicaudata (O. Pickard-Cambridge, 1876) --- Cairo to Luxor *
Holocnemus pluchei (Scopoli, 1763) --- Alexandria, Cairo, Nabq, Wadi Natron
Micropholcus fauroti (Simon, 1887) --- Cairo, Tanta
Nita elsaff Huber & El-Hennawy, 2007 --- Assiut, Cairo, El-Giza (El-Saff)
Pholcus opilionoides (Schrank, 1781) --- Ismailia [Figs. 4-5] NEW RECORD
Pholcus phalangioides (Fuesslin, 1775) --- Alexandria, Ismailia

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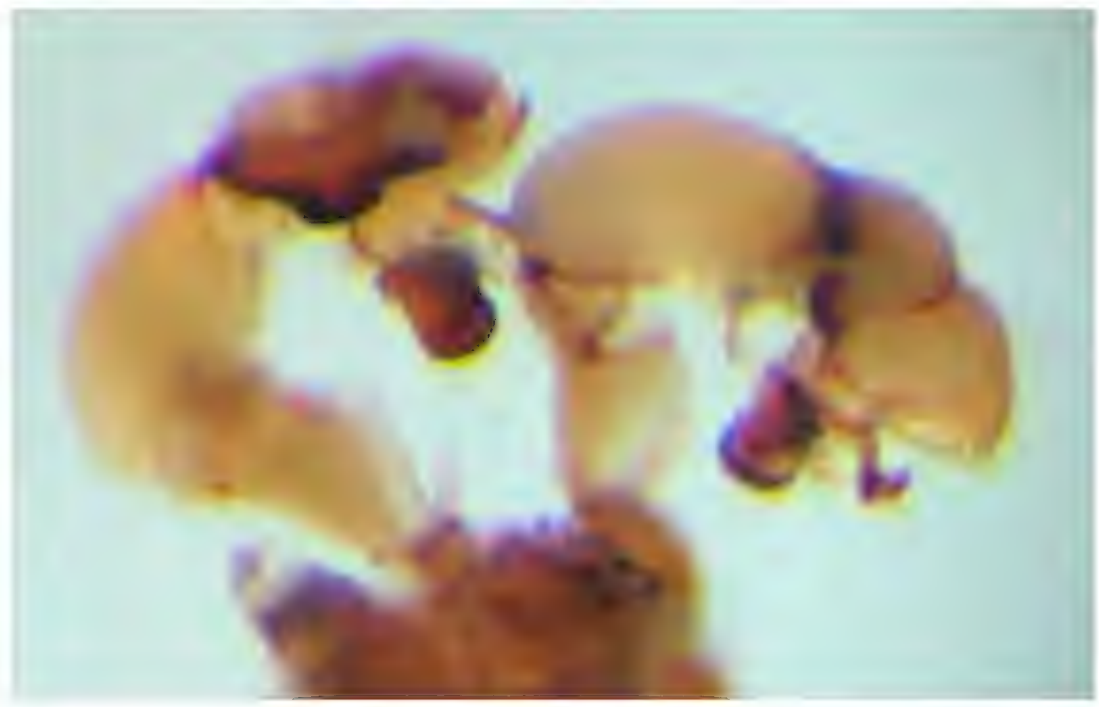
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Figs. 4-5. *Pholcus opilionoides* (Schrank, 1781) ♂, from Ismailia.
4. Habitus, dorsal view. 5. Pedipalps, lateral view.

Family Pisauridae Simon, 1890
Dolomedes hyppomene Savigny, 1825 --- Damietta *
Nilus curtus O. Pickard-Cambridge, 1876 --- Alexandria *
Pisaura mirabilis (Clerck, 1757) --- ?
Rothus atlanticus Simon, 1898 ? --- Siwa Oasis

Family Prodidomidae Simon, 1884
Prodidomus amaranthinus (Lucas, 1846) --- Alexandria, Cairo
Zimirina vastitatis Cooke, 1964 --- El-Salloum
Zimiris doriae Simon, 1882 --- Heliopolis (Cairo), Qena

Family Salticidae Blackwall, 1841
Aelurillus catherinae Prószyński, 2000 --- St. Catherine *
Aelurillus conveniens (O. Pickard-Cambridge, 1872) --- Siwa Oasis, Sinai (Mid Sinai, Jebel Musa)
Aelurillus dorthesi (Audouin, 1825) --- Cairo, Wadi Natron *

Aelurillus hirtipes Denis, 1960 --- Watia Pass (Mid Sinai)
Aelurillus luctuosus (Lucas, 1846) --- Lower Egypt
Aelurillus monardi (Lucas, 1846) --- Ashtoum El-Gamil, Cairo, Ismailia, Lower Egypt
Afraflacilla arabica Wesolowska & van Harten, 1994 --- Cairo, El-Mansoura
Afraflacilla spiniger (O. Pickard-Cambridge, 1872) --- Aswan, Badr district, Cairo, El-Menoufeia, Luxor, Sadat City
Afraflacilla tamaricis (Simon, 1885) --- Luxor, Siwa Oasis, Wadi Natron
Ballus piger O. Pickard-Cambridge, 1876 --- Upper Egypt *
Bianor albobimaculatus (Lucas, 1846) --- Alexandria, Cairo, El-Menoufeia, Siwa Oasis, Suez
Carrhotus occidentalis (Denis, 1947) --- Siwa Oasis *
Chalcoscirtus catherinae Prószyński, 2000 --- St. Catherine, near Taba
Euophrys catherinae Prószyński, 2000 --- St. Catherine, southern Sinai *
Euophrys granulata Denis, 1947 --- Siwa Oasis *
Festucula vermiformis Simon, 1901 --- Alexandria, Suez
Hasarius adansoni (Audouin, 1825) --- Alexandria, Cairo, El-Menoufeia, Ras El-Barr, Sadat City
Heliophanillus fulgens (O. Pickard-Cambridge, 1872) ---Alexandria, Cairo, El-Fayum, Luxor, Siwa Oasis, Suez, Upper Egypt
Heliophanus cupreus (Walckenaer, 1802) --- ?
Heliophanus decoratus L. Koch, 1875 --- Alexandria, Cairo, El-Giza, El-Zaranik, Ras El-Barr, Siwa Oasis, Suez, Wadi Natron
Heliophanus edentulus Simon, 1871 --- Alexandria
Heliophanus glaucus Bösenberg & Lenz, 1895 --- Alexandria, Siwa Oasis
Heliophanus sinaicus Logunov, 2015 --- Sinai (Pharaoh Island)
Langona alfensis Hęciak & Prószyński, 1983 --- Wadi Halfa
Langona mallezi (Denis, 1947) --- Siwa Oasis *
Langona redii (Audouin, 1825) --- Alexandria, Cairo
Logunyllus saliens (O. Pickard-Cambridge, 1876) --- Alexandria, Cairo, El-Uwaynat, Suez, Upper Egypt
Logunyllus tschoni (Caporiacco, 1936) --- El-Uwaynat, Ismailia
Mendoza canestrinii (Ninni, 1868) --- Alexandria
Menemerus animatus O. Pickard-Cambridge, 1876 ---Alexandria, Cairo, El-Giza, El-Omayed, El-Zaranik, Ismailia, Ras El-Barr, Siwa Oasis, Upper Egypt, Wadi Natron
Menemerus fagei Berland & Millot, 1941 --- Assiut, Cairo, El-Mansoura, Ras El-Barr, Zagazig
Menemerus gesneri (Audouin, 1825) --- ?
Menemerus hunteri (Audouin, 1825) --- ?
Menemerus illigeri (Audouin, 1825) --- Cairo
Menemerus semilimbatus (Hahn, 1829) --- Cairo, Upper Egypt
Menemerus soldani (Audouin, 1825) --- Alexandria, Siwa Oasis
Mexcala nigrocyanea (Simon, 1886) --- Siwa Oasis
Modunda staintoni (O. Pickard-Cambridge, 1872) --- Ismailia, Suez, Upper Egypt
Mogrus bonneti (Audouin, 1825) --- Alexandria, Siwa Oasis, Upper Egypt, Wadi El-Raiyan, Wadi Natron
Mogrus canescens (C.L. Koch, 1846) --- ?
Mogrus fulvovittatus Simon, 1882 --- Elba Prot., El-Burullus, El-Omayed, El-Zaranik, Nabq, Ras El-Barr

Mogrus logunovi Prószyński, 2000 --- Ras El-Barr
Mogrus mirabilis Wesolowska & van Harten, 1994 --- Ismailia, Sinai, Siwa Oasis, Wadi Halfa
Mogrus sinaicus Prószyński, 2000 --- Ras Mohammed, St. Catherine
Myrmarachne kiboschensis Lessert, 1925 --- Cairo
Myrmarachne tristis (Simon, 1882) --- El-Menoufeia, El-Zaranik, Nabq, Sadat City
Natta horizontalis Karsch, 1879 --- ?
Neaetha aegyptiaca Denis, 1947 --- El-Menoufeia, Siwa Oasis *
Neaetha cerussata (Simon, 1868) --- Ismailia
Neaetha oculata (O. Pickard-Cambridge, 1876) --- Upper Egypt
Pachypoessa plebeja (L. Koch, 1875) --- Cairo
Paraneaetha diversa Denis, 1947 --- Siwa Oasis *
Pellenes frischi (Audouin, 1825) --- ? *
Philaeus chrysops (Poda, 1761) --- southern Sinai
Phlegra bresnieri (Lucas, 1846) --- El-Menoufeia (Sadat City)
Phlegra flavipes Denis, 1947 --- El-Fayum, Siwa Oasis *
Phlegra memorialis (O. Pickard-Cambridge, 1876) --- Siwa Oasis, Upper Egypt *
Phlegra pori Prószyński, 1998 --- Mt. Catherina (southern Sinai) *
Phlegra proxima Denis, 1947 --- Siwa Oasis *
Plexippoides flavescens (O. Pickard-Cambridge, 1872) --- St. Catherine
Plexippus clemens (O. Pickard-Cambridge, 1872) --- Assiut, Badr district, El-Menoufeia (Shebeen El-Kom, Khatatba, Sadat City)
Plexippus paykulli (Audouin, 1825) --- Abu Galoum, Alexandria, Ashtoum El-Gamil, Assiut, Badr district, Cairo, Elba Prot. (El-Shalateen, Bir El-Gahliya), El-Giza, El-Mansoura, El-Menoufeia, El-Zaranik, Ismailia, Kafr El-Sheikh, Qena, Ras El-Barr, Sadat City, southern Sinai
Rafalus christophori Prószyński, 1999 --- St. Catherine
Rafalus feliksi Prószyński, 1999 --- Sinai (north west Wadi Esla)
Salticus druryi Audouin, 1825 --- ?
Salticus mendicus O. Pickard-Cambridge, 1876 --- Alexandria to Aswan
Salticus mouffeti Audouin, 1825 --- Alexandria
Salticus mutabilis Lucas, 1846 --- Ras El-Barr
Salticus paludivagus Lucas, 1846 --- Alexandria
Salticus propinquus Lucas, 1846 --- Alexandria, Cairo, El-Giza, Ismailia, Kafr El-Sheikh, Sadat City
Synageles dalmaticus (Keyserling, 1863) --- Alexandria, Badr district, Cairo, El-Giza, El-Menoufeia, Sadat City
Synageles repudiatus (O. Pickard-Cambridge, 1876) --- Alexandria, Siwa Oasis *
Thyene imperialis (Rossi, 1846) --- Assiut, Aswan, Badr district, Cairo, El-Fayum, El-Giza, El-Menoufeia, El-Tahrir Province, Ismailia, Nabq, New Valley, Qena, Sadat City, Sharm El-Sheikh, Siwa Oasis, Upper Egypt
Thyenula ammonis Denis, 1947 --- Siwa Oasis *

Family Scytodidae Blackwall, 1864
Scytodes bertheloti Lucas, 1838 --- Wadi Natron
Scytodes immaculata L. Koch, 1875 --- Alexandria, Cairo, El-Fayum, Upper Egypt, Wadi Halfa *
Scytodes obelisci Denis, 1947 --- Luxor *

Scytodes thoracica (Latreille, 1802) --- Cairo, Qena, Siwa Oasis
Scytodes univittata Simon, 1882 --- El-Menoufeia, Ismailia, Sadat City, Tanta [Figs. 8-10] NEW RECORD
Scytodes velutina Heineken & Lowe, 1832 --- Badr district, Cairo, El-Giza, El-Menoufeia, Ismailia, Sadat City, Siwa Oasis, Wadi Natron

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Figs. 6-10. *Scytodes univittata* Simon, 1882
6-7. ♀, from Sadat City. 6. Habitus, dorsal view. 7. Vulvae, ventral view.
8-10. ♂. 8-9. from Tanta, 10. from Ismailia. 8. Habitus, dorsal view (Note the spines of femur I.). 9-10. Pedipalp, retrolateral view.

Family Segestriidae Simon, 1893
Ariadna insidiatrix Savigny, 1825 --- Alexandria, Cairo
Segestria florentina (Rossi, 1790) --- Alexandria, Lower Egypt, southwestern Sinai

Family Selenopidae Simon, 1897
Selenops radiatus Latreille, 1819 --- Wadi Natron, Nile Valley

Family Sicariidae Keyserling, 1880
Loxosceles rufescens (Dufour, 1820) --- Alexandria, Assiut, Cairo, Qena, Siwa Oasis

Family Sparassidae Bertkau, 1872
Cebrennus aethiopicus Simon, 1880 --- Nubia
Cebrennus castaneitarsis Simon, 1880 --- Sinai
Cebrennus concolor (Denis, 1947) --- Siwa Oasis *
Cerbalus pellitus Kritscher, 1960 --- Fayed *
Cerbalus psammodes Levy, 1989 --- El-Zaranik
Cerbalus pulcherrimus (Simon, 1880) --- Aswan, Wadi Natron
Eusparassus bicorniger (Pocock, 1898) --- ?
Eusparassus dufouri Simon, 1932 --- ?
Eusparassus oraniensis (Lucas, 1846) --- Siwa Oasis
Eusparassus walckenaeri (Audouin, 1825) --- Assiut, Cairo, Elba Prot. (El-Shalateen, Bir El-Gahliya), Qena, Siwa Oasis, southern Sinai, Upper Egypt, Wadi Natron
Gnathopalystes crucifer (Simon, 1880) --- (Port Said?) ?
Heteropoda variegata (Simon, 1874) --- ?
Olios suavis (O. Pickard-Cambridge, 1876) --- Siwa Oasis, near Gebel Silsilis (Upper Egypt)

Family Synaphridae Wunderlich, 1986
Synaphris letourneuxi (Simon, 1884) --- Aswan, Ismailia *

Family Tetragnathidae Menge, 1866
Glenognatha argyrostilba (O. Pickard-Cambridge, 1876) --- Alexandria
Tetragnatha chrysochlora (Audouin, 1825) --- ? *
Tetragnatha flava (Savigny, 1825) --- Alexandria, Rosetta *
Tetragnatha isidis (Simon, 1880) --- Alexandria
Tetragnatha nitens (Savigny, 1825) --- Alexandria, Cairo, El-Manzalah, Rosetta, Siwa Oasis, Wadi El-Raiyan, Wadi Natron

Family Theridiidae Sundevall, 1833
Argyrodes argyrodes (Walckenaer, 1842) --- Ras El-Barr, Siwa Oasis
Crustulina conspicua (O. Pickard-Cambridge, 1872) --- El-Giza
Dipoena braccata (C.L. Koch, 1841) --- El-Menoufeia, Sadat City [Figs. 11-14] NEW RECORD
Enoplognatha deserta Levy & Amitai, 1981 --- St. Catherine
Enoplognatha gemina Bosmans & Van Keer, 1999 --- Alexandria, Ashtoum El-Gamil, Cairo, El-Fayum, Ismailia
Euryopis albomaculata Denis, 1951 --- Cairo, El-Giza, Sadat City, Sharqiyah (Fakous) *
Euryopis campestrata Simon, 1907 --- Cairo *
Euryopis episinoides (Walckenaer, 1847) --- Alexandria, El-Giza, Ismailia
Euryopis quinqueguttata Thorell, 1875 --- Siwa Oasis
Heterotheridion nigrovariegatum (Simon, 1873) --- Alexandria, Ismailia, Siwa Oasis, Suez
Kochiura aulica (C.L. Koch, 1838) --- Alexandria, Badr district, Cairo, El-Fayum, El-Giza, Ismailia, Nile Delta, Qena, Sadat City, Siwa Oasis, Wadi Natron
Latrodectus geometricus C.L. Koch, 1841 --- Cairo
Latrodectus pallidus O. Pickard-Cambridge, 1872 --- Alexandria, Elba Prot., El-Zaranik, Nabq

Latrodectus tredecimguttatus (Rossi, 1790) --- Alexandria, El-Tahrir Province, Sadat City, Salahyeh, Mid Sinai, Nabq
Nesticodes rufipes (Lucas, 1846) --- Cairo
Paidiscura dromedaria (Simon, 1880) --- Assiut, Ismailia, Elba Prot., El-Zaranik, Nabq, Qena, Sadat City, Suez
Platnickina nigropunctata (Lucas, 1846) --- Alexandria
Ruborridion musivum (Simon, 1873) --- Mid Sinai
Steatoda ephippiata (Thorell, 1875) --- El-Omayed, El-Zaranik, Mid Sinai
Steatoda erigoniformis (O. Pickard-Cambridge, 1872) --- Alexandria, Ashtoum El-Gamil, Assiut, Badr district, El-Fayum, Ismailia, Nile Delta
Steatoda latifasciata (Simon, 1873) --- Mid Sinai, St. Catherine
Steatoda paykulliana (Walckenaer, 1806) --- Alexandria, Ashtoum El-Gamil, El-Burullus, El-Mansourah (Sallant), El-Zaranik, Ismailia, southern Sinai
Steatoda triangulosa (Walckenaer, 1802) --- Cairo, El-Zaranik, Wadi Natron
Steatoda venator (Savigny, 1825) --- Alexandria *
Theridion cairoense Wunderlich, 2011 --- Cairo
Theridion incanescens Simon, 1890 --- Cairo, El-Giza, Sadat City
Theridion jordanense Levy & Amitai, 1982 --- Cairo, El-Giza, Sadat City
Theridion melanostictum O. Pickard-Cambridge, 1876 --- Alexandria, Assiut, Badr district, Cairo, El-Fayum, El-Giza, Nile Delta, El-Zaranik, Sadat City
Theridion spinitarse O. Pickard-Cambridge, 1876 --- Aswan, Badr district, Cairo, Luxor
Theridion varians Hahn, 1833--- Alexandria, Badr district

11

12

13

14

Figs. 11-14. *Dipoena braccata* (C.L. Koch, 1841) ♂, from Sadat City.
11. Habitus, lateral view. 12-14. Pedipalp, retrolateral, ventral, and prolateral views.

Family Thomisidae Sundevall, 1833
Firmicus dewitzi Simon, 1899 --- Wadi Natron
Heriaeus buffoni (Audouin, 1825) --- Ras Mohammed
Misumena atrocincta Costa, 1875 --- ? *
Ozyptila judaea Levy, 1975 --- Sinai (near Taba)
Ozyptila subclavata (O. Pickard-Cambridge, 1876) --- Alexandria
Pistius truncatus (Pallas, 1772) --- ?
Runcinia grammica (C.L. Koch, 1837) --- Alexandria, Badr district, El-Arish, El-Bawitti, Fatira, Kom Osheem, Qena, Sadat City
Synema candicans (O. Pickard-Cambridge, 1876) --- Alexandria *
Synema diana (Audouin, 1825) --- Cairo to Luxor, Fatira, Kom Osheem, Nabq, Ras El-Barr, Siwa Oasis, Sinai (Wadi Esla), Wadi Natron
Synema globosum (Fabricius, 1775) --- ?
Synema valentinieri Dahl, 1907 --- Upper Egypt *
Thomisus bidentatus Kulczyński, 1901 --- southern Sinai
Thomisus onustus Walckenaer, 1805 --- El-Zaranik, Elba Prot., Kom Osheem, Ras El-Barr, Siwa Oasis, southern Sinai, Wadi El-Raiyan
Thomisus spinifer O. Pickard-Cambridge, 1872 --- Aswan, Assiut, Badr district, Cairo to Luxor, Elba Prot., El-Arish, El-Bawitti, El-Fayum, El-Giza, Fatira, Ismailia, Nile Delta, Qena, Sadat City, Siwa Oasis, Wadi Natron
Tmarus piochardi (Simon, 1866) --- Siwa Oasis
Xysticus bliteus (Simon, 1875) --- Alexandria, Cairo
Xysticus clercki (Audouin, 1825) --- ?
Xysticus cristatus (Clerck, 1757) --- Alexandria
Xysticus ferus O. Pickard-Cambridge, 1876 --- Alexandria, southern Sinai
Xysticus lalandei (Audouin, 1825) --- Cairo, Elba Prot., southwestern Sinai
Xysticus peccans O. Pickard-Cambridge, 1876 --- ? *
Xysticus promiscuus O. Pickard-Cambridge, 1876 --- Alexandria, El-Fayum, Ismailia
Xysticus sabulosus (Hahn, 1832) --- ?
Xysticus sinaiticus Levy, 1999 --- Sinai (Nabq)
Xysticus tristrami (O. Pickard-Cambridge, 1872) --- Assiut, El-Giza, Rafah, St. Catherine, Tanta

Family Titanoecidae Lehtinen, 1967
Nurscia albomaculata (Lucas, 1846) --- Alexandria, Ashtoum El-Gamil, Assiut, Al-Kanater (Nile Barrage), Badr district, El-Fayum, El-Giza, El-Menoufeia (Shebin El-Kom), Ismailia, Ras El-Barr, Sinai (Ain Gudeirat)
Titanoeca tristis L. Koch, 1872 --- ?

Family Trachelidae Simon, 1897
Trachelas minor O. Pickard-Cambridge, 1872 --- El-Beheira (Badr district), Sadat City

Family Uloboridae Thorell, 1869
Uloborus plumipes Lucas, 1846 --- Cairo to Assiut, Nile Valley, near Red Sea, Siwa Oasis
Uloborus walckenaerius Latreille, 1806 --- Assiut, Badr district, Cairo, El-Giza, El-Zaranik, Ismailia, Siwa Oasis

Family Zodariidae Thorell, 1881
Lachesana perversa (Savigny, 1825) --- Cairo, El-Zaranik

Palaestina eremica Levy, 1992 --- St. Catherine
Ranops expers (O. Pickard-Cambridge, 1876) --- Alexandria, St. Catherine
Trygetus riyadhensis Ono & Jocqué, 1986 --- St. Catherine
Trygetus sexoculatus (O. Pickard-Cambridge, 1872) --- Suez, west of southern Sinai
Zodarion cyrenaicum Denis, 1935 --- Ismailia (Qassassin)
Zodarion nitidum (Savigny, 1825) --- Alexandria, Cairo, northern Sinai
Zodarion pileolonotatum Denis, 1935 --- Siwa Oasis

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Corrections of the distribution of some species

Gea nilotica Simon, 1906	Gondokoro, Sudan	not Egypt
Hyllus plexippoides Simon, 1906	Gondokoro, Sudan	not Egypt
Poecilochroa antineae Fage, 1929	Asselar, Mali	not Egypt
Stenaelurillus werneri Simon, 1906	Mongalla, Sudan	not Egypt
Philodromus denisi Levy, 1977	Egypt	not Libya
Rhysodromus sinaiticus (Levy, 1977)	Sinai (Egypt)	not Israel
Trygetus sexoculatus (O. Pickard-Cambridge, 1872)		Egypt & Israel

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Illustrated key to spider families of Egypt (Arachnida: Araneae)

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Abstract

A key to spider families of Egypt is prepared depending on published literature and personal experience. It is a dichotomous key to the 41 families of spiders recorded from Egypt. It is illustrated by 60 figures: 70 drawings + 75 photographs.

Keywords: Spiders, Araneae, key to families, Egypt.

Introduction

Although ".. very few people actually use keys, preferring instead to just flick through what illustrations there may be. However, there are some cases where this is difficult and the student has to examine minute structures and cope with abbreviations" (Murphy & Roberts, 2015), the following key is prepared to help the beginner arachnologist in Egypt to identify spider families.

In 1982, the author's first key to spider families was extracted from that of Petrunkevitch (1939). It was not published along 25 years because it was not convincing enough. Now, this present key is mainly extracted from the key of Dippenaar-Schoeman & Jocqué (1997) with some modifications from other keys of Jocqué & Dippenaar-Schoeman (2006) and Murphy & Roberts (2015). It is illustrated to facilitate identification of families. Taking into account that 13 among the 41 families recorded from Egypt (El-Hennawy, 2017) are represented by one genus each, thus the identification reaches the genus level too in them. Each family name in the key is followed by the number of genera and species recorded from this family in Egypt and the number of the figure of a specimen of a species or more.

There are many figures illustrating the key. Drawings are almost after three main references as following:

- 40 figures [Afr.Sp.] after Dippenaar-Schoeman & Jocqué (1997) [f.22e, f.24a,b,c,d, f.24g,h, f.25a,b, f.27a,b,d, f.29b, f.30c,g, f.31c,f, f.32d, f.33b,e, f.34c,e,f,g, f.35e, f.36a,b,f,h, f.37c,h, f.38b,d, f.39d,e,f,g, f.62a,d, f.84e];
- 16 figures [Descr.Eg.] after Savigny & Audouin (1825) [pl.1, f.1,2,3,4,8; pl.2, f.6; pl.3, f.7,8; pl.4, f.6,9; pl.5, f.1,2,9; pl.6, f.4,6; pl.7, f.7];

- 9 figures [SpK] after Levi & Levi (1968) pp. 28, 34, 35, 53, 78, 82, 98;
- 1 figure after Benoit (1977: f. F) and another after Koch (1875: pl.7 f.7).
- Fig. 2: Cheliceral fangs movement, after El-Hennawy (2016: 33) and Figs. 20b,d: after El-Hennawy (2008: Figs. 4, 13).

Photographs: 71 photographs [4, 7a,b,c, 8, 9, 10, 11, 12a,b, 13b, 14, 15, 16a,b, 17a,b, 18a, 19a, 20a,b, 21a, 22b, 23a, 26c,d,e, 29a,b, 30c, 31a, 32a,b, 33a,c, 34a,b,c, 35a,b,c, 37b, 38a,b,c, 39c, 41b,c, 42, 44a, 50a,b,c, 52a, 53a,b, 54a,b,c, 55a, 56a,b, 57a, 58a,b,c,d,e, 59c, 60c,d] were taken by the author in addition to 13c by M. Abdelhafez, 41a by A. El-Gendy, and 47b,c by I. Zaher.

Abbreviations used: Afr.Sp. = *African Spiders* (Dippenaar-Schoeman & Jocqué, 1997); Descr.Eg. = *Description de l'Égypte, Histoire naturelle, Arachnides* (Savigny & Audouin, 1825); SpK = *Spiders and their Kin* (Levi & Levi, 1968).

This work mainly depended on "*African Spiders*" of Dippenaar-Schoeman & Jocqué (1997) for both the key and figures in addition to the other references mentioned before. The author is greatly indebted to all of them. This key needs the opinions of its users to "develop" it. The next step is to prepare a key to genera and species of spiders recorded from Egypt.

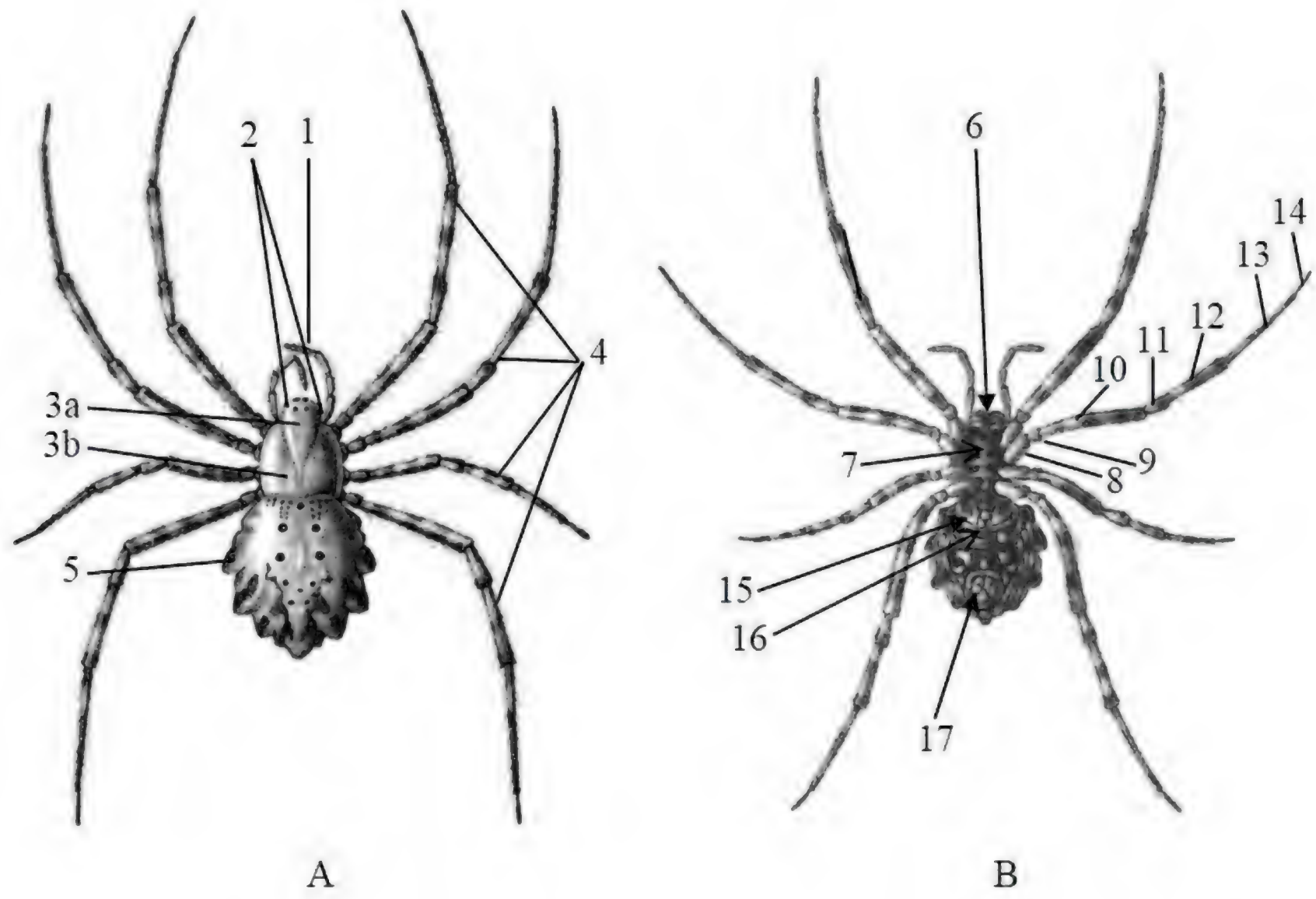


Fig. 1. External morphology of Araneomorphae, Araneidae, *Argiope lobata* (Pallas, 1772) ♀ (Descr.Eg. pl.2, f.6). A. dorsal view. B. ventral view.
1. Pedipalp. 2. Eyes. 3. Cephalothorax. 3a. Cephalic region. 3b. Thoracic region. 4. Walking legs. 5. Abdomen. 6. Chelicerae. 7. Sternum. 8. Coxa. 9. Trochanter. 10. Femur. 11. Patella. 12. Tibia. 13. Metatarsus. 14. Tarsus. 15. Book-lung. 16. Genital opening. 17. Spinnerets.

Key to Egyptian Spider Families

1. Two pairs of book-lungs (Fig. 2A); chelicerae paraxial, with fangs closing towards abdomen, in longitudinal axis (Fig. 2B); posterior lateral spinneret of 3 or 4 segments ..... Mygalomorphae 2
- One pair of book-lungs (Fig. 2C) or absent; chelicerae diaxial, with fangs closing towards body midline, almost in transverse axis (Fig. 2D); posterior lateral spinneret of only 2 segments ..... Araneomorphae 3

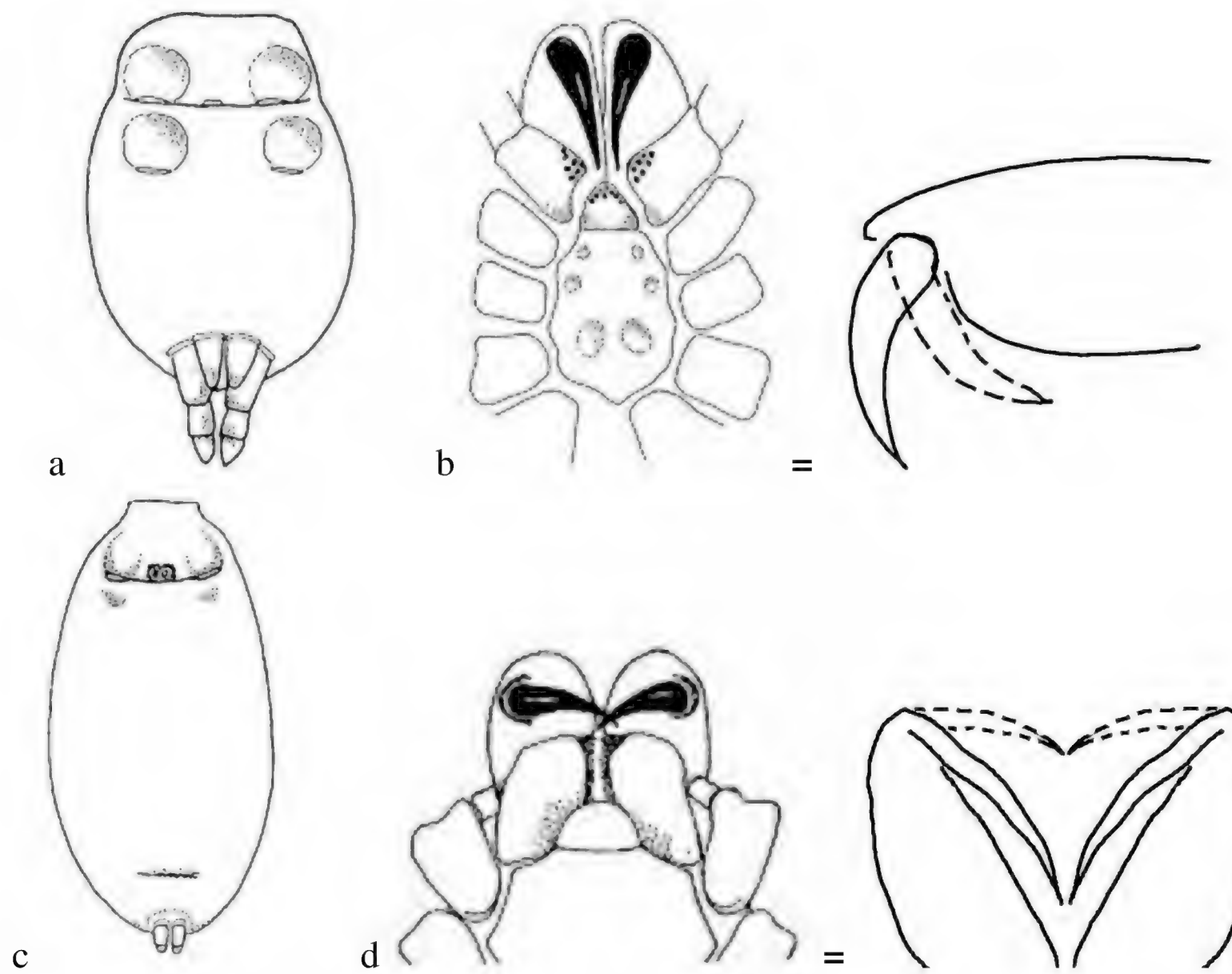


Fig. 2. a. abdomen, ventral view, showing two pairs of book-lungs. b. cephalothorax, ventral view, showing fangs closing towards abdomen. c. abdomen, ventral view, showing one pair of book-lungs. d. chelicerae, ventral view, showing fangs closing towards body midline (Afr.Sp. f.24a,b,c,d). [Cheliceral fang movement, after El-Hennawy, 2016: 33]

2. Leg tarsi with two claws; paired claws with one row of teeth; claw tufts and scopulae present, scopulae on metatarsi and tarsi usually forming thick pads of iridescent setae surrounding and obscuring the paired tarsal claws (Fig. 3a); apical segment of posterior spinnerets long and finger-like; body hirsute (Fig. 3b) ..... Theraphosidae [1 genus, 2 species] (Fig. 4)
- Leg tarsi with three claws; paired claws with two rows of teeth; claw tufts absent, scopulae present, never forming iridescent thick pads; posterior spinnerets shorter and closer together ..... Nemesiidae [1 genus, 1 species] (Fig. 5)

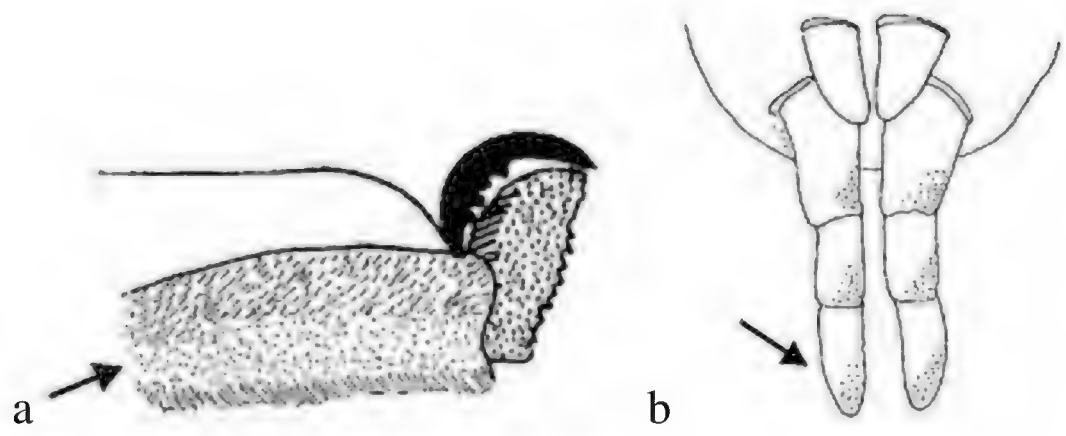


Fig. 3. a. tarsus, showing dense scopula (Afr.Sp. f.25a). b. Theraphosidae, spinnerets, showing posterior pair with long apical segment (Afr.Sp. f.25b).

4

5

Fig. 4. Theraphosidae, *Chaetopelma olivaceum* (C.L. Koch, 1841) ♀.
Fig. 5. Nemesiidae, *Nemesia cellicola* Savigny, 1825 ♀ (Descr.Eg. pl.1, f.1).

3. Anal tubercle large, two-segmented with fringe of long curved setae (Fig. 6a, b) ..... Oecobiidae [2 genera, 7 species] (Fig. 7)
- Anal tubercle normal, a single segment, without long curved setae 4

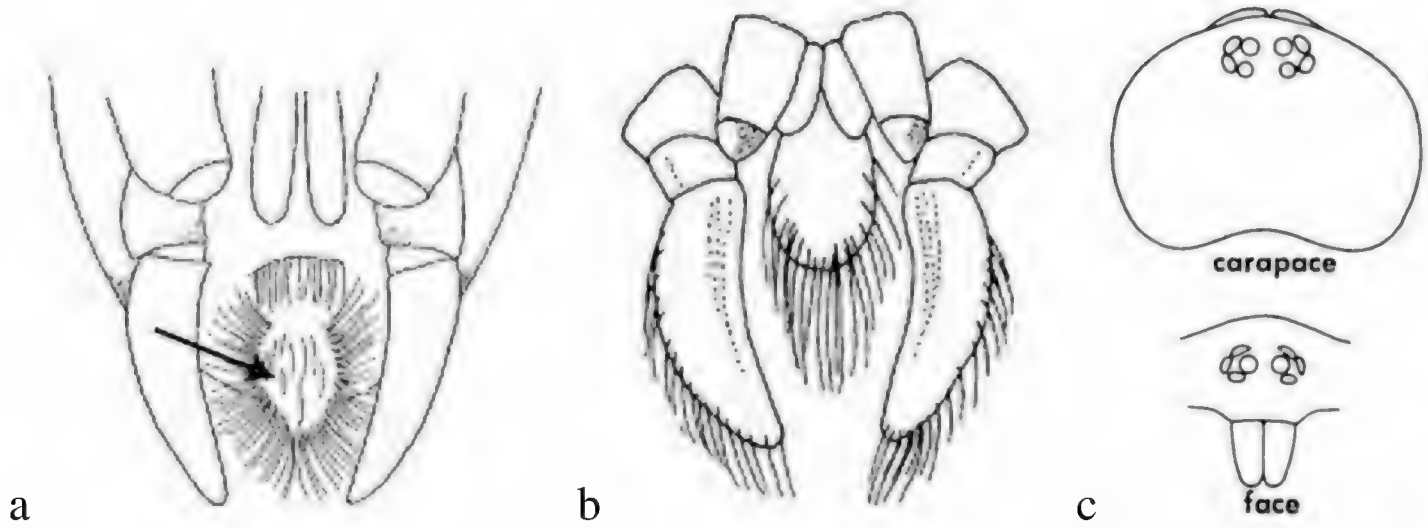


Fig. 6a. Oecobiidae, ventral view, showing anal tubercle (Afr.Sp. f.27a).
Uroctea sp. b. spinnerets, ventral view (Afr.Sp. f.37c). c. carapace in dorsal view and anterior view showing eye pattern (SpK p.34).

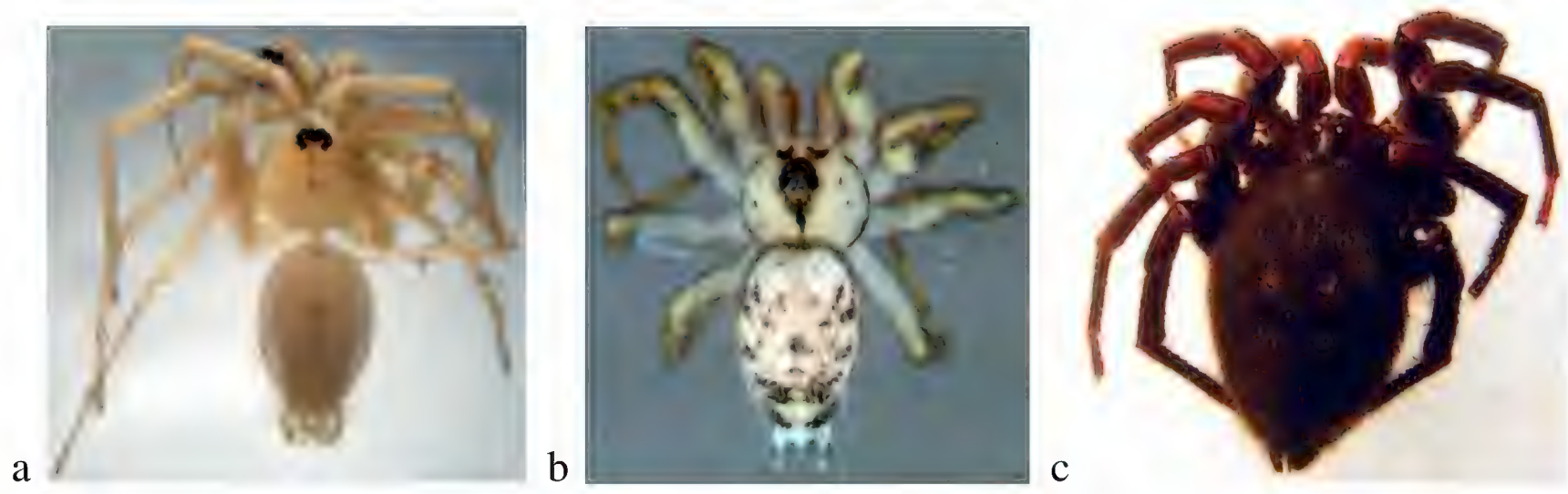
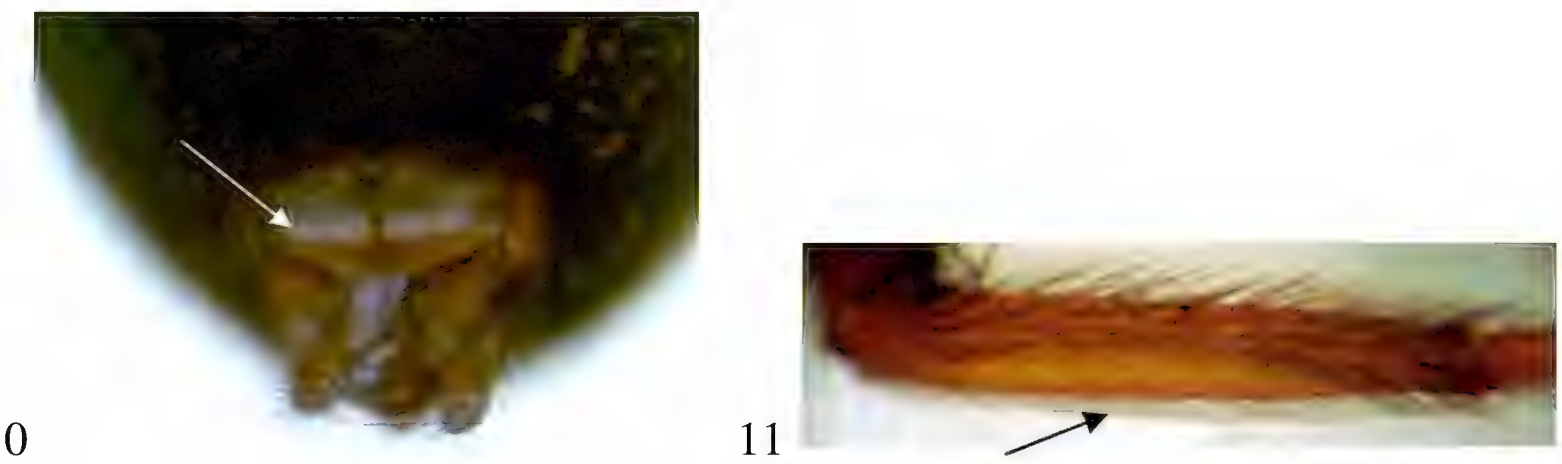


Fig. 7. Oecobiidae. a. *Oecobius putus* O. Pickard-Cambridge, 1876 ♂. b. *Oecobius navus* Blackwall, 1859 ♂. c. *Uroctea* sp. ♀.

4. Cribellum (Figs. 8, 10) and calamistrum (Figs. 9, 11) present (sometimes absent in males) ..... Cribellate spiders 5
- Cribellum and calamistrum absent ..... Ecribellate spiders 9

Figs. 8, 9. Eresidae. 8. *Stegodyphus dufouri* (Audouin, 1825) ♀, spinnerets ventral view showing cribellum. 9. *Stegodyphus manicatus* Simon, 1876 ♀, metatarsus IV, showing calamistrum.



Figs. 10, 11. Titanoecidae, *Nurscia albomaculata* (Lucas, 1846) ♀. 10. spinnerets ventral view showing cribellum. 11. metatarsus IV, showing calamistrum.

5. Eyes in a compact group on a slight hump, carapace narrowed anteriorly (Fig. 12a,b); spinnerets advanced, located ventrally instead of terminally; labium fused to sternum (Fig. 12c); haplogyne ..... Filistatidae [3 genera, 4 species] (Fig. 12)
- Eyes, spinnerets and carapace not as above; labium not fused to sternum; entelegyne .. 6

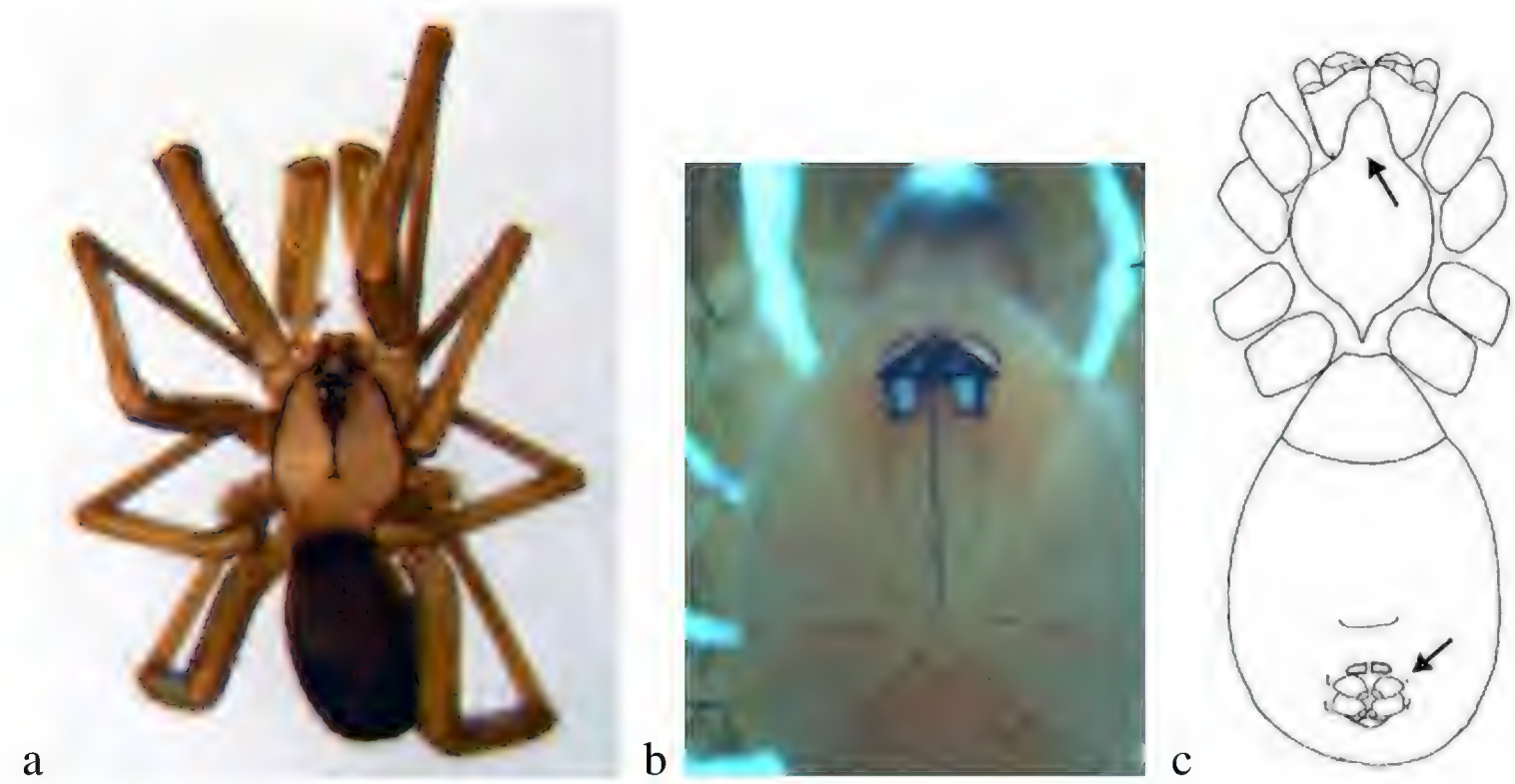


Fig. 12. Filistatidae, *Filistata insidiatrix* (Forskål, 1775). a. ♂, dorsal view. b. ♀, eyes in a compact group. c. Filistatidae, ventral view of body, showing fused sternum and position of spinnerets (Afr.Sp. f.27b).

6. Femora with rows of long trichobothria (Fig. 13a); metatarsi IV usually compressed and curved under line of calamistrum (Fig. 13b); first pair of legs clearly longer than second pair ..... Uloboridae [1 genus, 2 species] (Fig. 13c)
- Femora without rows of long trichobothria; metatarsi IV not compressed and curved; first pair of legs not longer than second pair 7

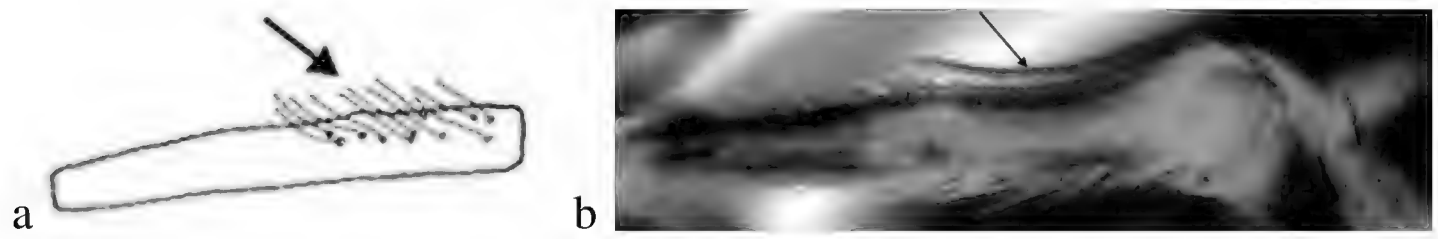


Fig. 13. Uloboridae. a. femur with long trichobothria (Afr.Sp. f.27d). b. leg IV in lateral view, showing calamistrum. c. *Uloborus walckenaerius* Latreille, 1806 ♀ [Photo by Mahmoud S. Abdelhafez]

7. Carapace rectangular (Fig. 14); ocular area long, anterior lateral eyes and posterior lateral eyes more than four times their diameter apart ..... Eresidae [4 genera, 6 species] (Fig. 16a,b, 17a)
- Carapace narrowed in front (Fig. 15); ocular area shorter, anterior lateral eyes and posterior lateral eyes less than four times their diameter apart 8

14 15

Fig. 14. Eresidae, *Stegodyphus manicatus* Simon, 1876 ♀, carapace in dorsal view, showing eye pattern. Fig. 15. Dictynidae, ♂, dorsal view.

8. Endites parallel; abdomen dark, with pale spots or without pattern (Fig. 17b) ..... Titanoecidae [2 genera, 2 species] (Fig. 17b)
- Endites converging; abdomen with dark pattern on pale background (Fig. 28a) ..... Dictynidae [5 genera, 6 species] (Fig. 15)

a b

Fig. 16a,b. Eresidae, *Stegodyphus dufouri* (Audouin, 1825) a. ♂. b. ♀.

a b

Fig. 17. a. Eresidae, *Dorceus quadrispilotus* Simon, 1908 ♂.
b. Titanoecidae, *Nurscia albomaculata* (Lucas, 1846) ♀.

9. Six eyes 10
- Eight eyes 15

10. Carapace domed towards thoracic region (Fig. 18a) ..... Scytodidae [1 genus, 6 species] (Fig. 18)
- Carapace differently shaped 11

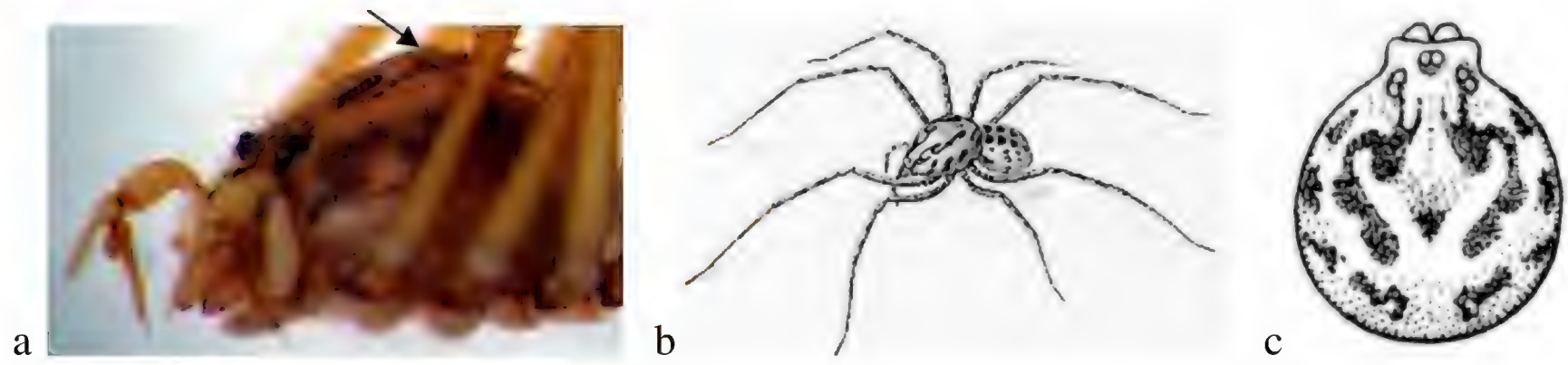


Fig. 18. a. Scytodidae, *Scytodes univittata* Simon, 1882 ♂, body in lateral view, showing dome-shaped carapace. b. *Scytodes thoracica* (Latreille, 1802) ♀ (Descr.Eg. pl.5, f.1). c. *Scytodes* sp. carapace in dorsal view showing eye pattern (SpK p.28).

11. Tracheal spiracles paired, distinct, positioned just behind epigastric groove (Fig. 19a); booklungs may be replaced by pair of tracheae 12
- Tracheal spiracle single, inconspicuous, positioned just in front of spinnerets (Fig. 19b) 14

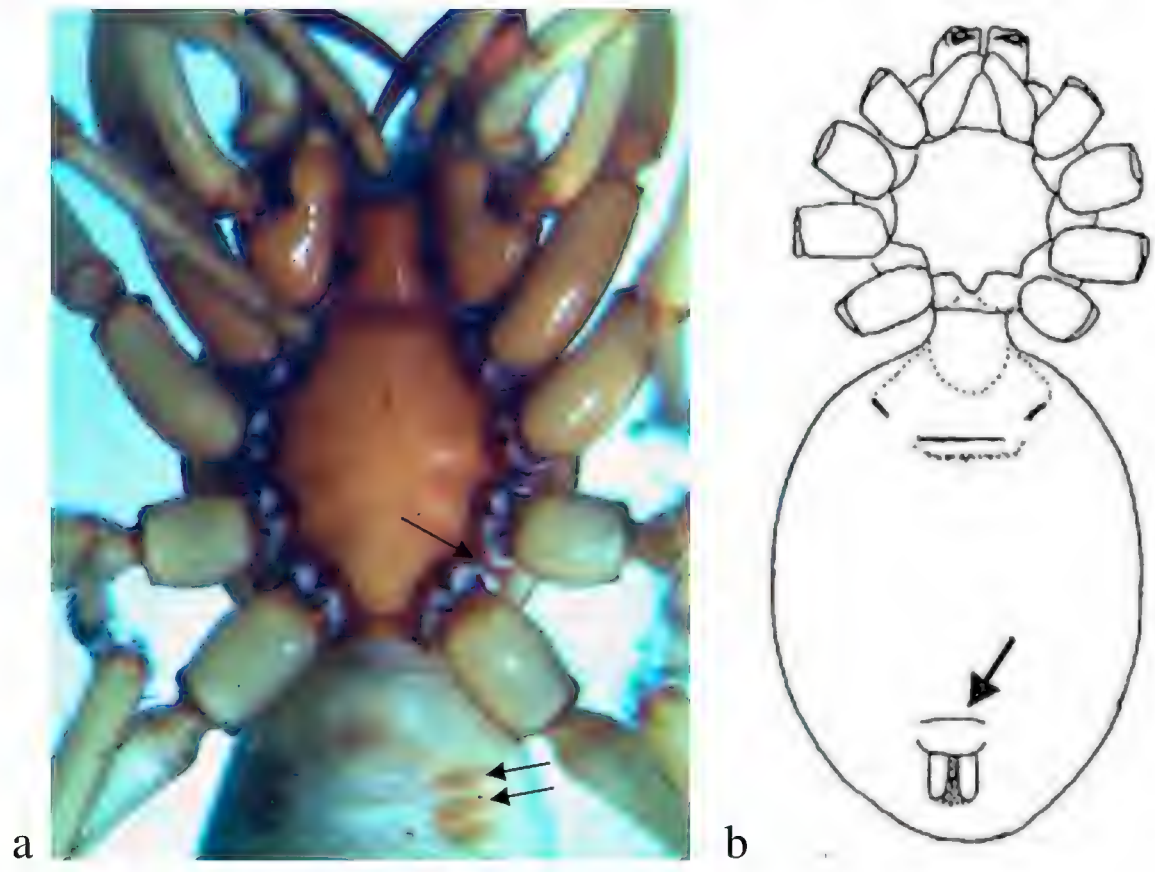


Fig. 19. Dysderidae, *Dysdera crocata* C.L. Koch, 1838 ♀. a. anterior part of abdomen in ventral view, showing paired anterior tracheal spiracles (2 arrows) and sternum, showing intercoxal sclerites. b. body, ventral view, showing posterior tracheal spiracle (Afr.Sp. f.30c).

12. Total body length of adult <5 mm; female palp clawless; abdomen without pattern, either with scuta (Fig. 20a,b) or uniformly soft; endites converging .... Oonopidae [7 genera, 9 species] (Fig. 20)
- Total body length of adult >5 mm 13

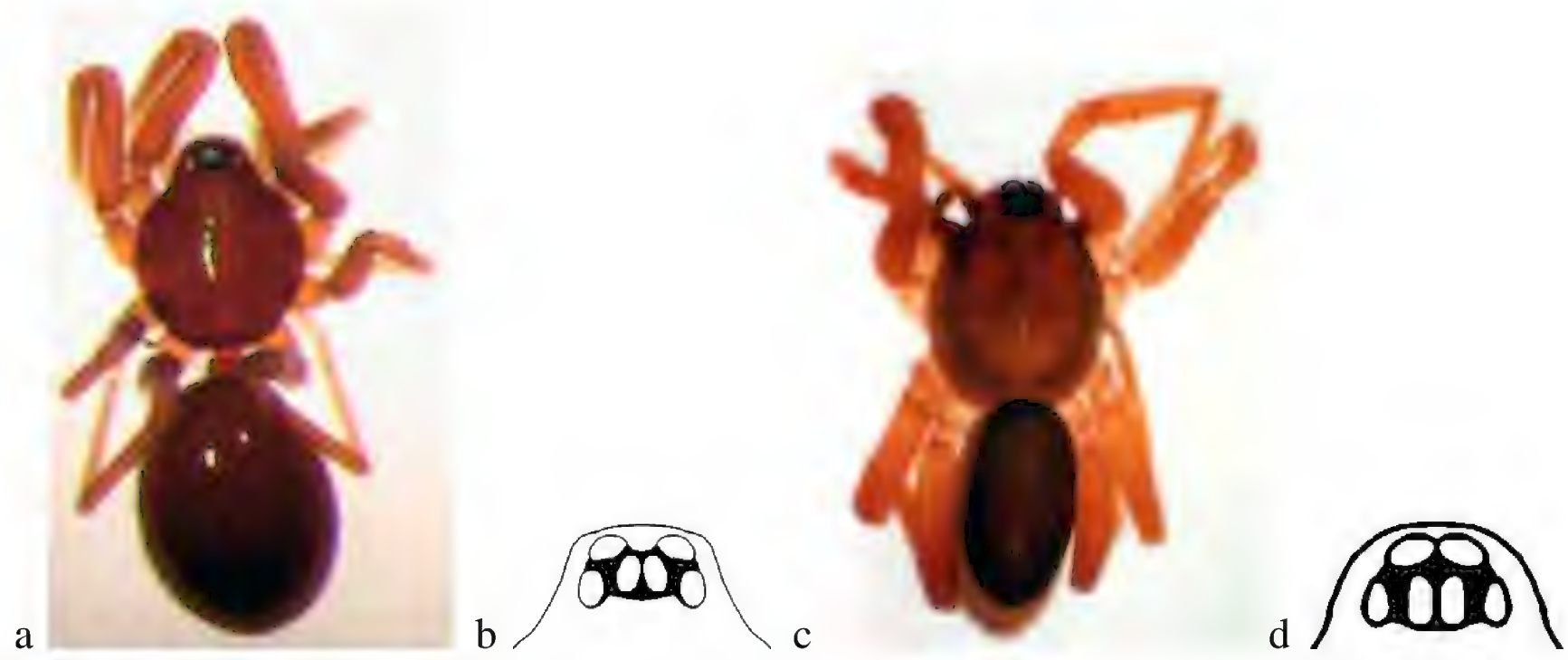


Fig. 20a,b. Oonopidae, a. *Dysderina scutata* (O. Pickard-Cambridge, 1876) ♂, b. eyes, dorsal view. c. *Ischnothyreus velox* Jackson, 1908 ♂, d. eyes, dorsal view.
[b,d. after El-Hennawy, 2008: Figs. 4, 13]

13. Two tarsal claws; third pair of legs directed backwards (Fig. 73a); sternum with intercoxal sclerites (Fig. 19a) ..... Dysderidae [1 genus, 7 species] (Fig. 21a)
- Three tarsal claws; third pair of legs directed forwards (Fig. 109a); sternum without intercoxal sclerites ..... Segestriidae [2 genera, 2 species] (Fig. 21c,d)

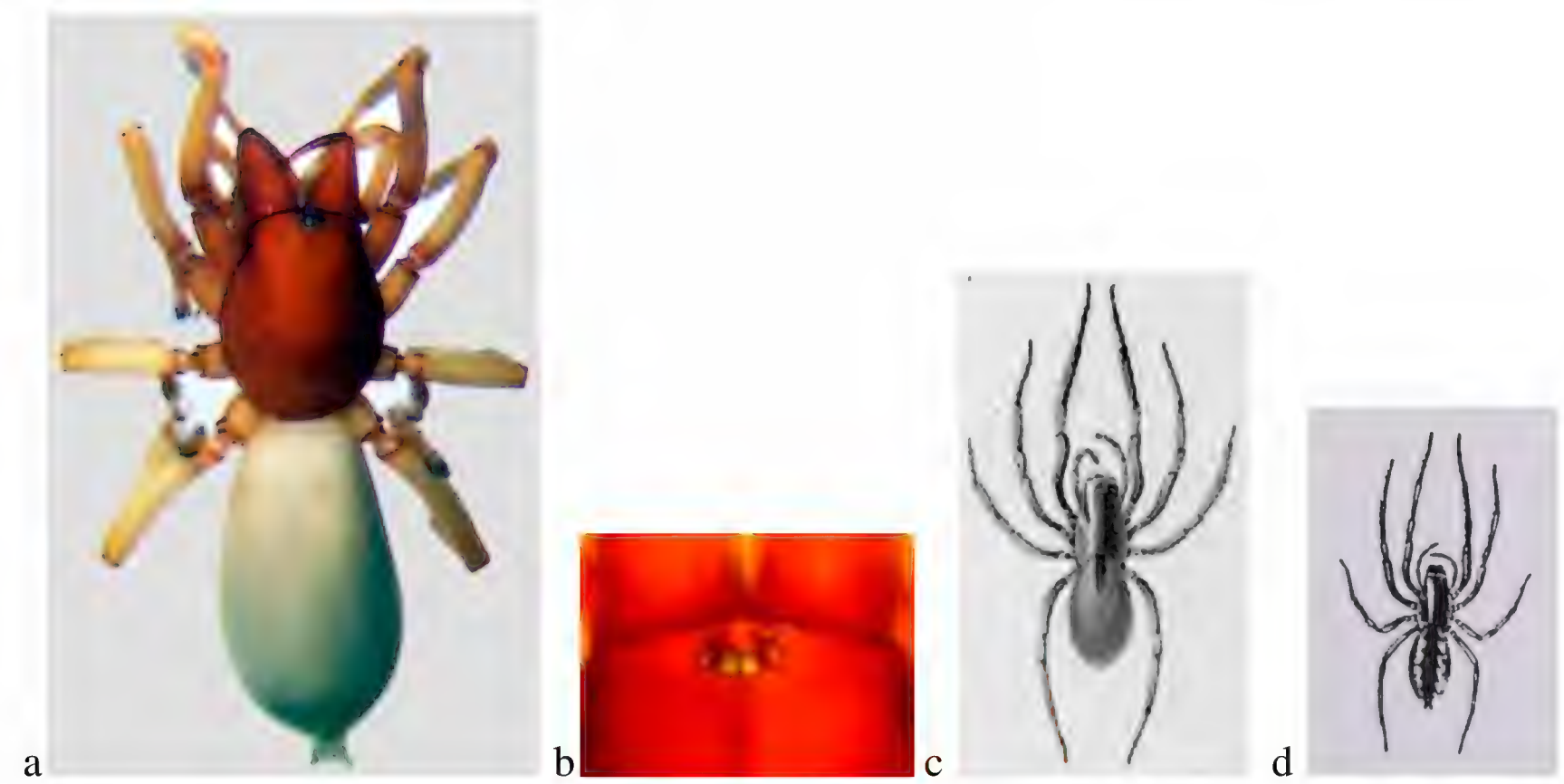


Fig. 21. a. Dysderidae, *Dysdera crocata* C.L. Koch, 1838 ♀, b. its eye pattern.
c. Segestriidae, *Ariadna insidiatrix* Savigny, 1825 ♀ (Descr.Eg. pl.1, f.3).
d. Segestriidae, *Segestria florentina* (Rossi, 1790) ♀ (Descr.Eg. pl.1, f.2).

14. All eyes similar in size, in three diads (Fig. 22b); cheliceral fangs long and slender; six spinnerets ..... Sicariidae [1 genus, 1 species] (Fig. 22a)
- Anterior median eyes clearly larger than other eyes (Fig. 23a); cheliceral fangs short and thickened at base (Fig. 23b); four spinnerets, anterior pair large and closely set (Fig. 23c) ..... Zodariidae (*Trygetus*)

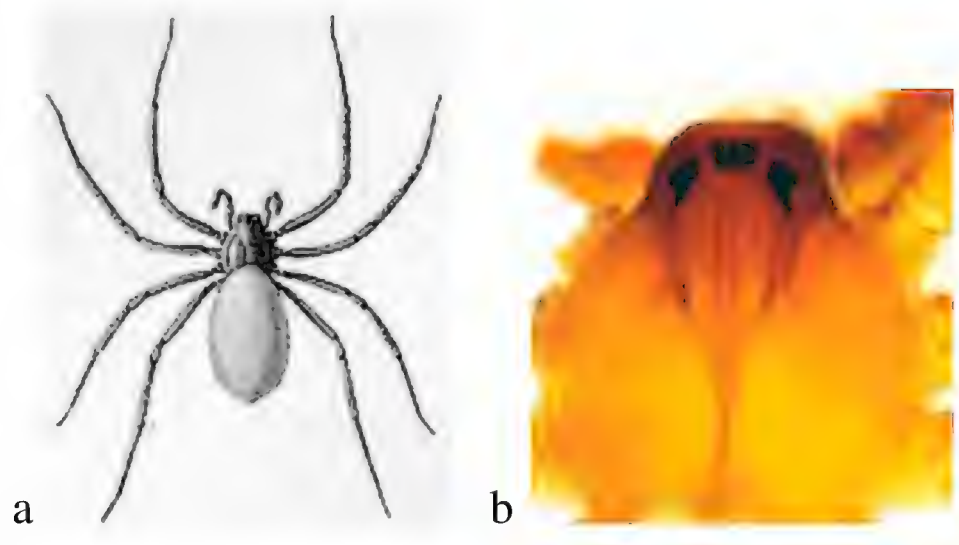


Fig. 22. Sicariidae, *Loxosceles rufescens* (Dufour, 1820) ♀, a. dorsal view (Descr.Eg. pl.5, f.2). b. carapace in dorsal view, showing eye pattern.

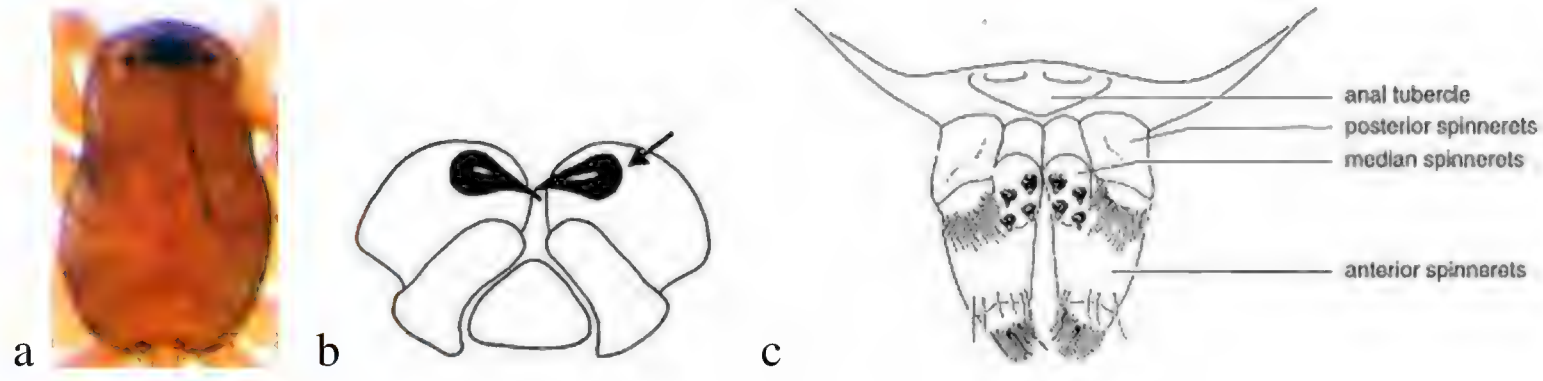


Fig. 23. Zodariidae (*Trygetus* sp.). a. cephalothorax in dorsal view, showing eye pattern. b. chelicerae in ventral view, showing short fangs (Afr.Sp. f.30g). c. spinnerets, dorsal view (Afr.Sp. f.22e).

15. Leg tarsus with two claws (Fig. 24a) 16
- Leg tarsus with three claws (Fig. 24b) 31

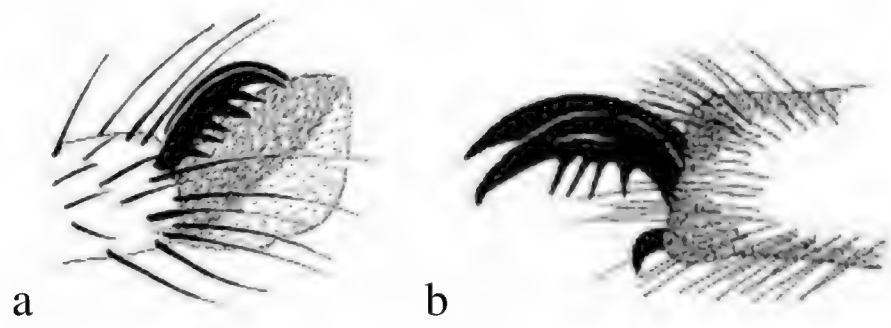


Fig. 24. a. tarsus with two claws (Afr.Sp. f.24g). b. tarsus with three claws (Afr.Sp. f.24h).

16. Anterior pair of legs longer and heavier than other legs; metatarsi and tibiae I with strong prolateral scopulae (Fig. 25a); sternum broadly produced and truncated between posterior coxae ..... Palpimanidae [1 genus, 3 species] (Fig. 25a)
- Legs and sternum not as above 17

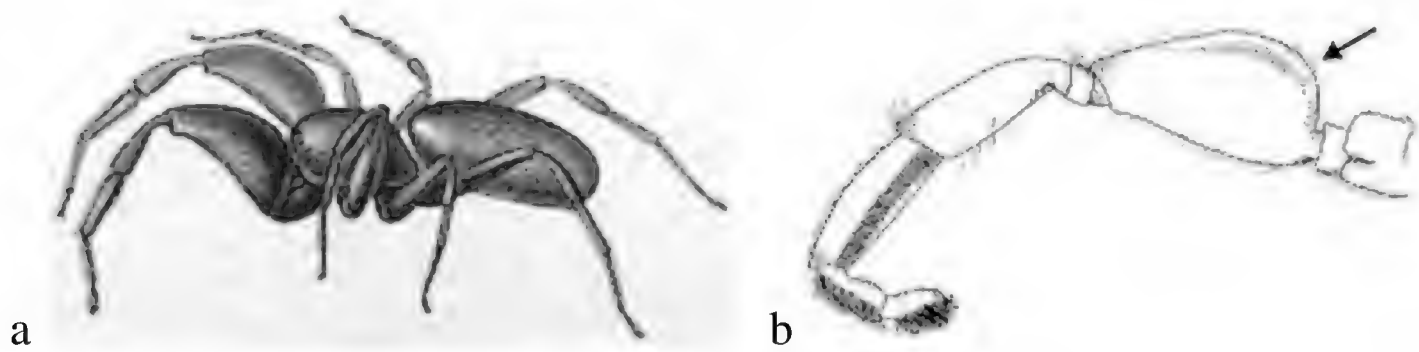


Fig. 25. Palpimanidae. a. *Palpimanus gibbulus* Dufour, 1820 ♂ (Descr.Eg. pl.7, f.7).
b. front leg, showing enlarged femur (Afr.Sp. f.29b).

17. Eyes in three rows (4:2:2), anterior median eyes very large (Fig. 26); jumping spiders ..... Salticidae [33 genera, 74 species] (Fig. 26)
- Eyes differently arranged 18

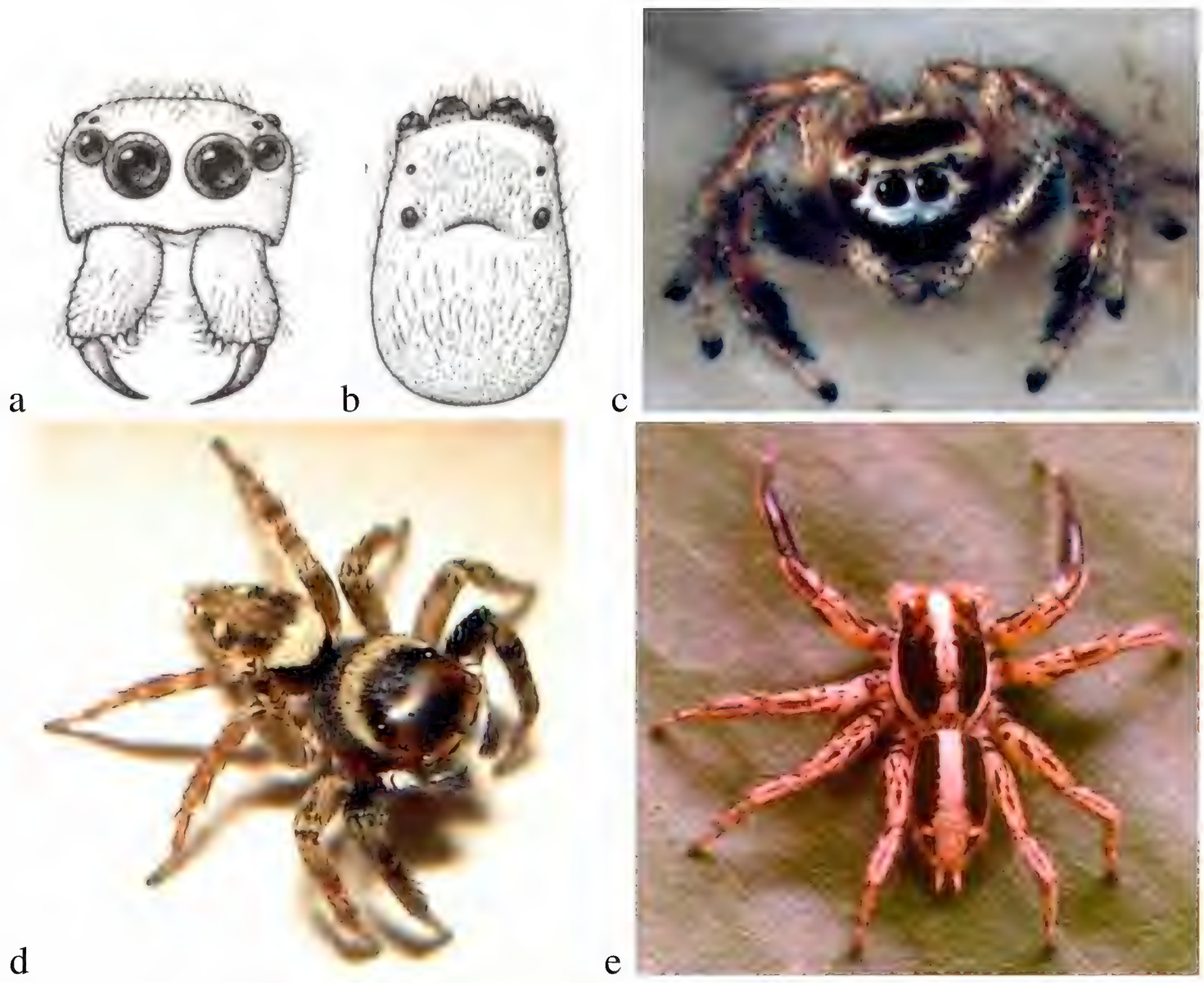


Fig. 26. Salticidae, carapace a. in anterior view. b. dorsal view, showing eye pattern (SpK p.98). c. *Thyene imperialis* (Rossi, 1846) ♂. d. *Hasarius adansoni* (Audouin, 1825) ♂. e. *Plexippus paykulli* (Audouin, 1825) ♂.

18. Legs laterigrade, directed towards side (Fig. 31c) 19
- Legs prograde, directed forwards (I, II) and backwards (III, IV) (Fig. 31c) 22

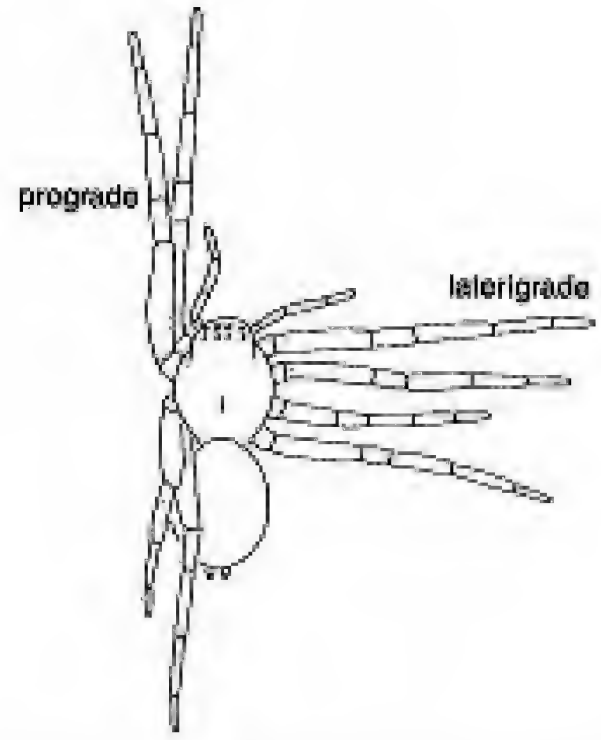


Fig. 27. body, dorsal view, showing laterigrade and prograde orientation of legs (Afr.Sp. f.31c).

19. Flat spiders, with eyes in two rows (6:2) (Fig. 28b) .....
..... Selenopidae [1 genus, 1 species] (Fig. 28a)
- Usually less flat but if flat, eyes differently arranged 20

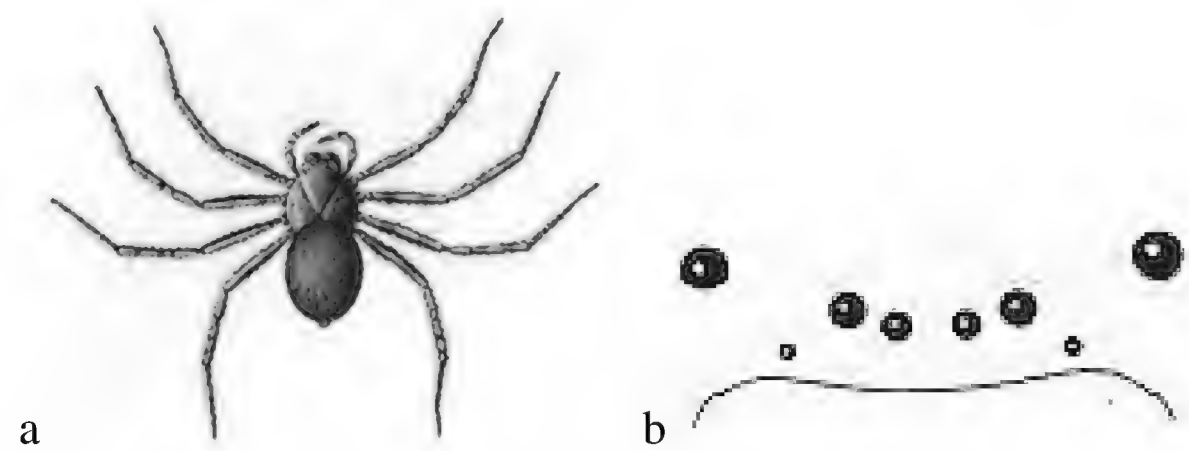


Fig. 28. Selenopidae, *Selenops radiatus* Latreille, 1819 ♀, a. dorsal view. b. carapace in anterior view, showing eye pattern (Descr.Eg. pl.6, f.6).

20. Tarsi and metatarsi without scopulae; legs I and II usually longer than legs III and IV (Fig. 29a,b) ..... Thomisidae [10 genera, 25 species] (Fig. 29a,b)
- Tarsi and sometimes metatarsi with scopulae; legs not as above 21

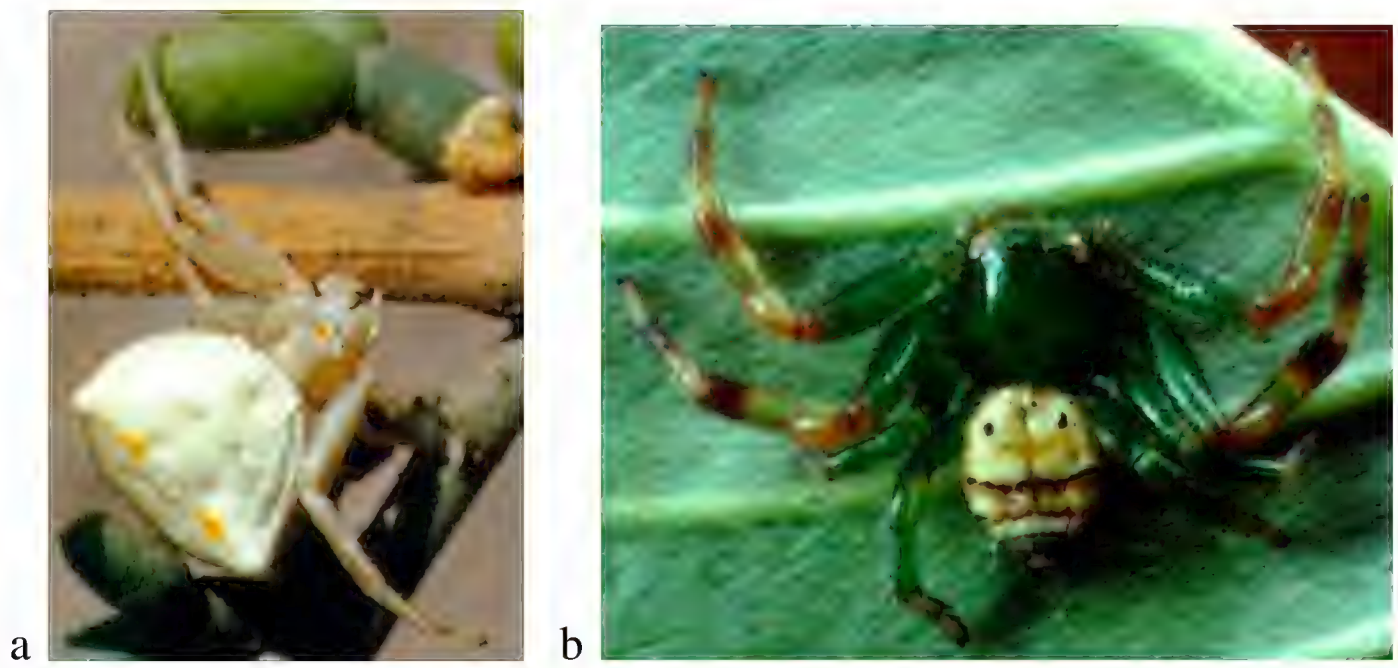


Fig. 29. Thomisidae. a. *Thomisus onustus* Walckenaer, 1805 ♀.
b. *Synema diana* (Audouin, 1825) ♀.

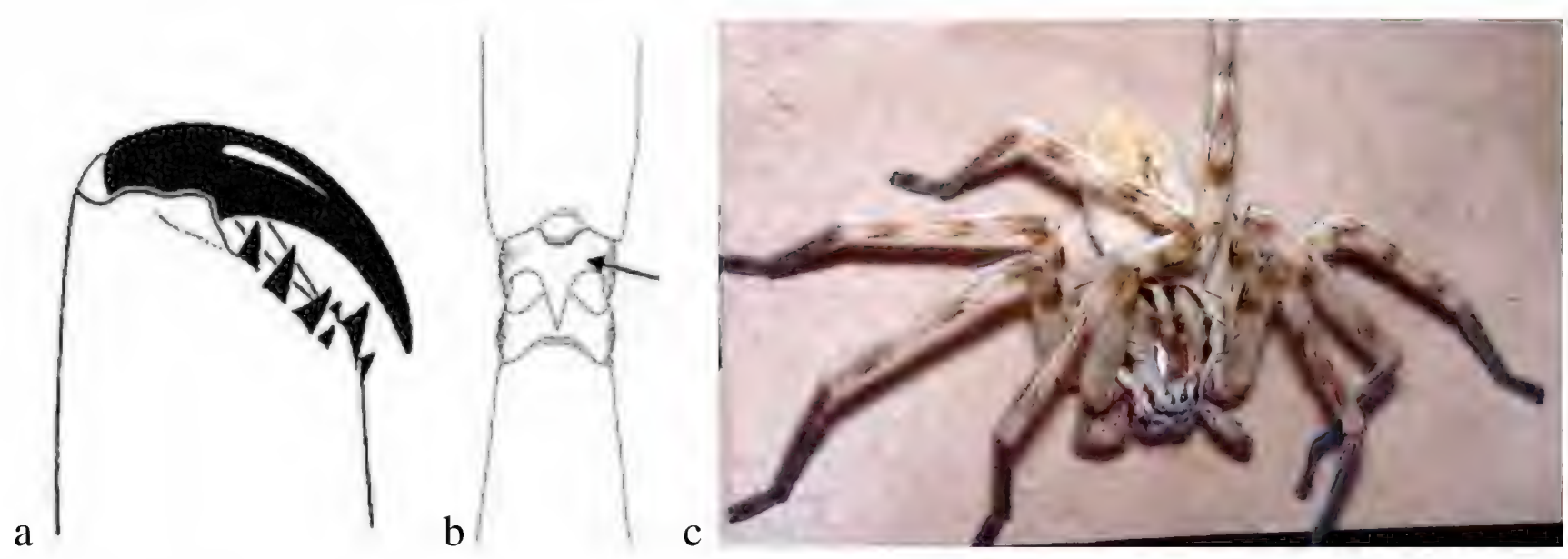


Fig. 30. Sparassidae, a. teeth on chelicera (Afr.Sp.f. 31e). b. tribolate membrane connecting metatarsus and tarsus (Afr.Sp. f.31f). c. *Eusparassus walckenaeri* (Audouin, 1825) ♀.

21. Medium-sized to very large spiders (6-35 mm); chelicerae with at least two teeth on retromargin (Fig. 30a); soft trilobate membrane between metatarsus and tarsus permitting hypermobility of tarsus (Fig. 30b) ..... Sparassidae [6 genera, 13 species] (Fig. 30c)
- Small to medium-sized spiders (3-16 mm); chelicerae without teeth or at most one on retromargin; tarsus-metatarsus allowing movement in one plane only .... Philodromidae [6 genera, 20 species] (Fig. 31)

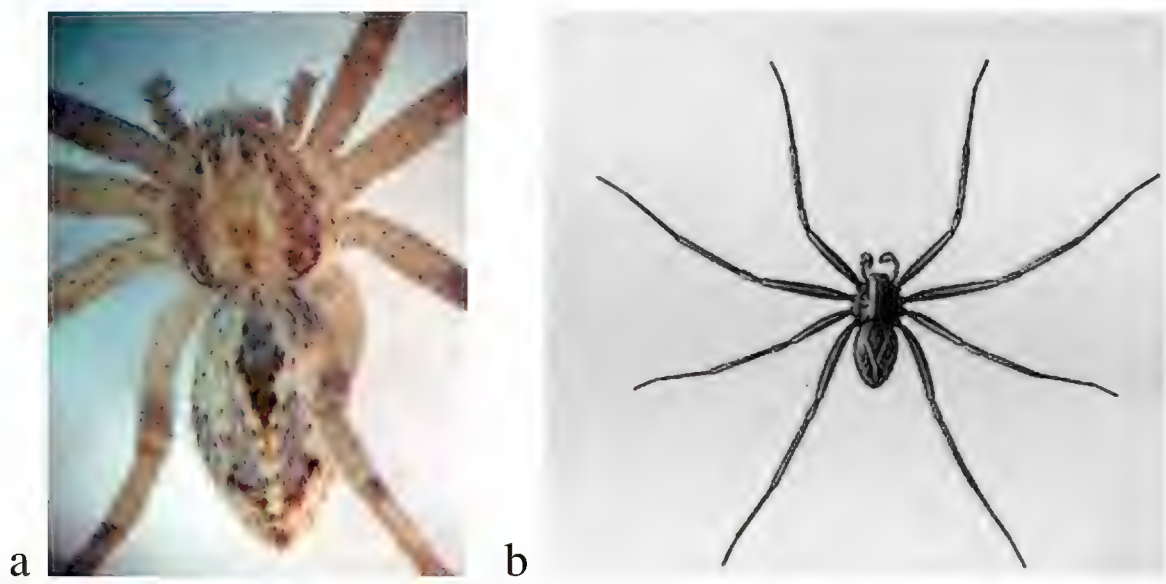


Fig. 31. Philodromidae, *Thanatus albini* (Audouin, 1825). a. ♀. b. ♂ (Descr.Eg. pl.6, f.4).

22. All tarsi clearly curled (in preserved specimens), pseudo-segmented 23
- Tarsi straight, not pseudo-segmented 24

23. Anterior spinnerets long and cylindrical, widely separated (Fig. 32b) ..... Gnaphosidae (*Megamyrmaekion*) (Fig. 32a)
- Anterior spinnerets conical, not wide part (Fig. 32d) .... Cithaeronidae [1 genus, 1 species] (Fig. 32c)

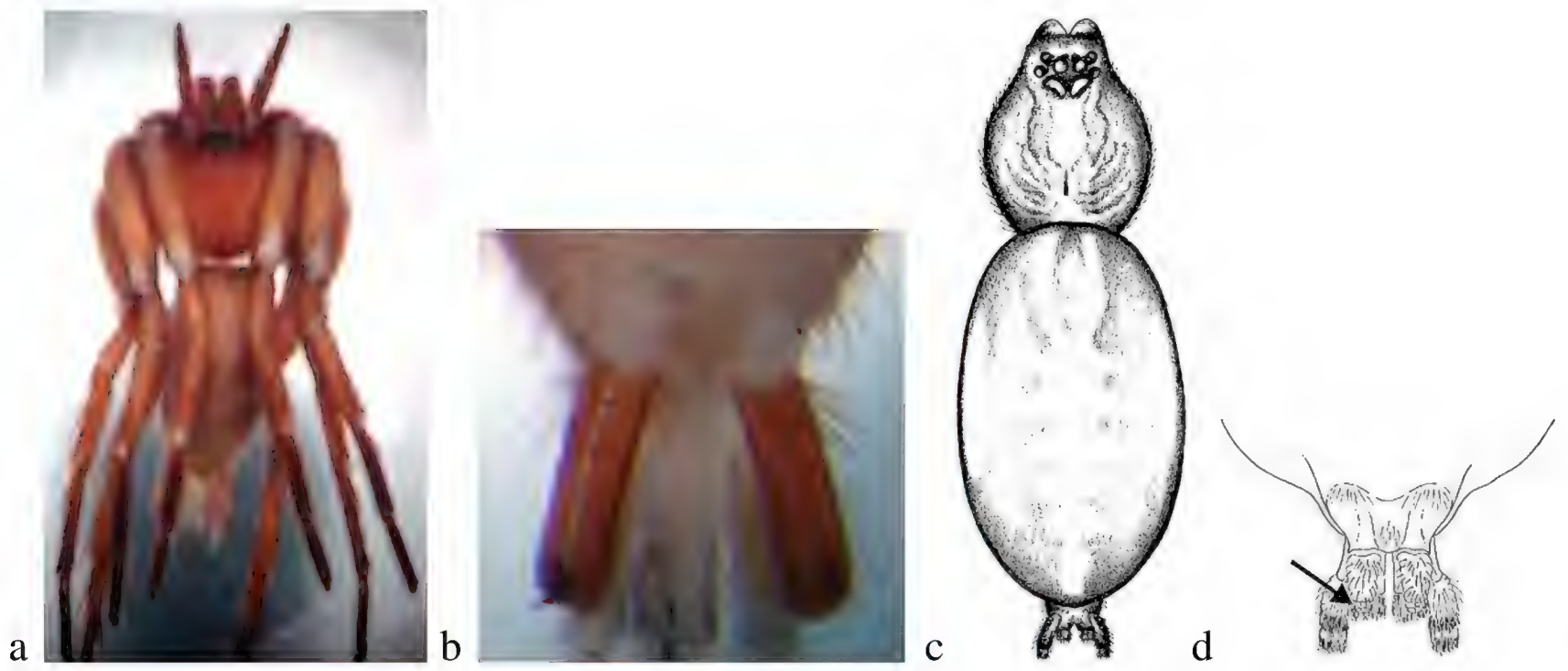


Fig. 32. Gnaphosidae, *Megamyrmaekion caudatum* Reuss, 1834 ♀. a. dorsal view.
b. spinnerets, ventral view. Cithaeronidae, *Cithaeron* sp. ♀. c. dorsal view (Afr.Sp. f.62a).
d. spinnerets, ventral view, showing anterior spinnerets with subdistal ring (Afr.Sp. f.62d).

24. Posterior median eyes oval and pale (Fig. 33a); endites obliquely depressed (Fig. 33b); anterior spinnerets long and cylindrical, widely separated, one-segmented (Fig. 33c) ... 25
- Posterior median eyes usually round; endites not obliquely depressed; anterior spinnerets conical, not widely separated 26

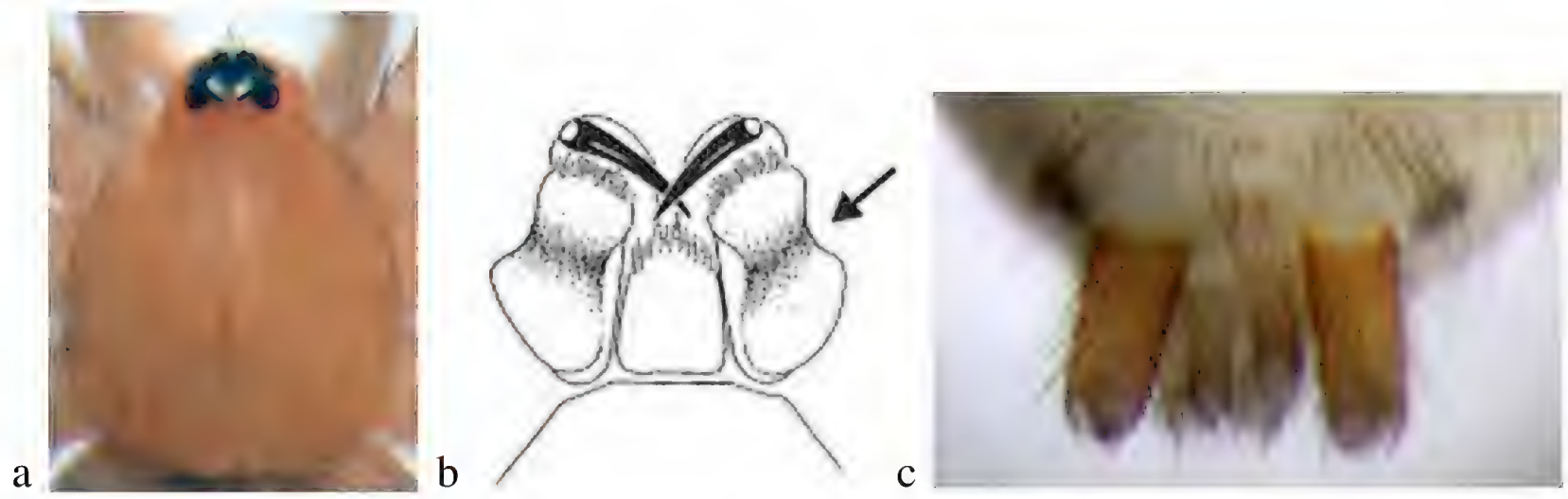


Fig. 33. Gnaphosidae. a. *Pterotricha conspersa* (O. Pickard-Cambridge, 1872) ♂, carapace in dorsal view showing eye pattern. b. mouthparts in ventral view, showing obliquely depressed endites (Afr.Sp. f.32d). c. *Berlandina plumalis* (O. Pickard-Cambridge, 1872) ♀, spinnerets, ventral view.

25. Anterior spinnerets situated slightly forward; spigots elongated with long plumose setae (Fig. 34a); eyes in circular arrangement (Fig. 34b) or in two rows ..... Prodidomidae [3 genera, 3 species] (Fig. 34c)
- Anterior spinnerets terminal, without long setae on spigots (Fig. 33c); eyes in two rows (Fig. 33a) ..... Gnaphosidae [20 genera, 47 species] (Fig. 35a,b,c)

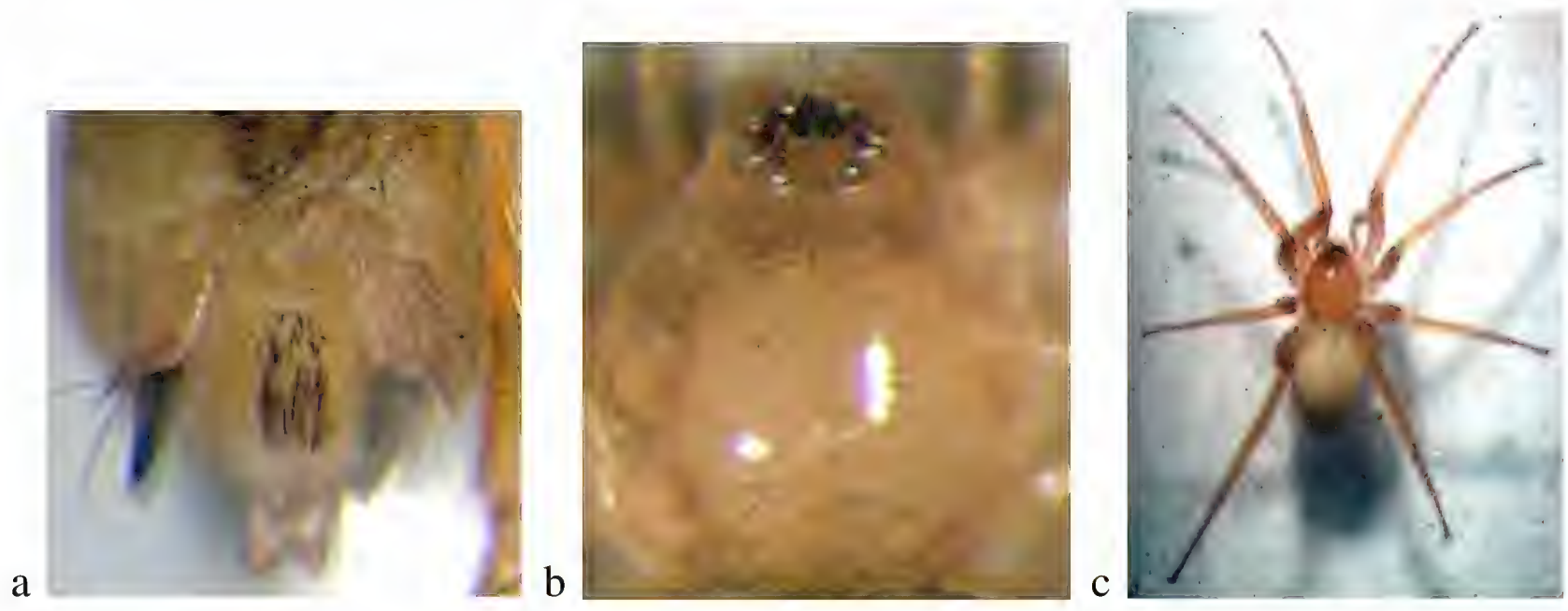


Fig. 34. Prodidomidae, *Zimiris doriae* Simon, 1882 ♀. a. spinnerets showing position and plumose setae. b. carapace in dorsal view, showing eye pattern. c. ♀, dorsal view.

Fig. 35. Gnaphosidae. a. *Pterotricha lesserti* Dalmas, 1921 ♀. b. *Poecilochroa pugnax* (O. Pickard-Cambridge, 1874) ♂. c. *Setaphis subtilis* (Simon, 1897) ♂.

26. Eyes in three rows (2:4:2); anterior lateral eyes situated just in front of posterior lateral eyes (Fig. 36a,b) ..... Ctenidae [20 genera, 47 species] (Fig. 36c)
- Eyes in two rows (4:4) 27

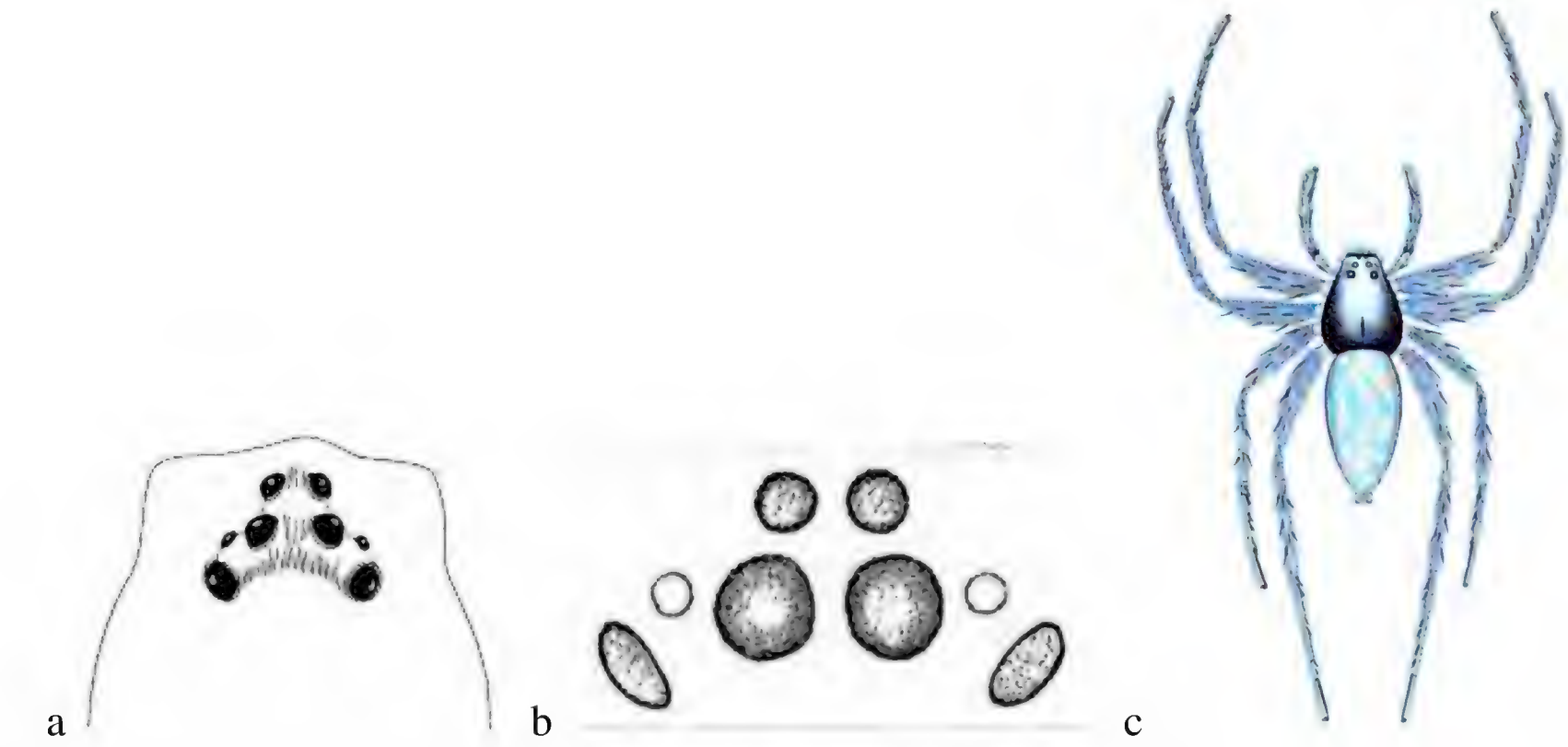


Fig. 36. Ctenidae. a. carapace in dorsal view, showing eye pattern (Afr.Sp. f.33b). *Anahita pallida* (L. Koch, 1875) ♀, b. eye pattern (After Benoit, 1977: f. F). c. ♀, dorsal view, after L. Koch (1875: pl.7 f.7).

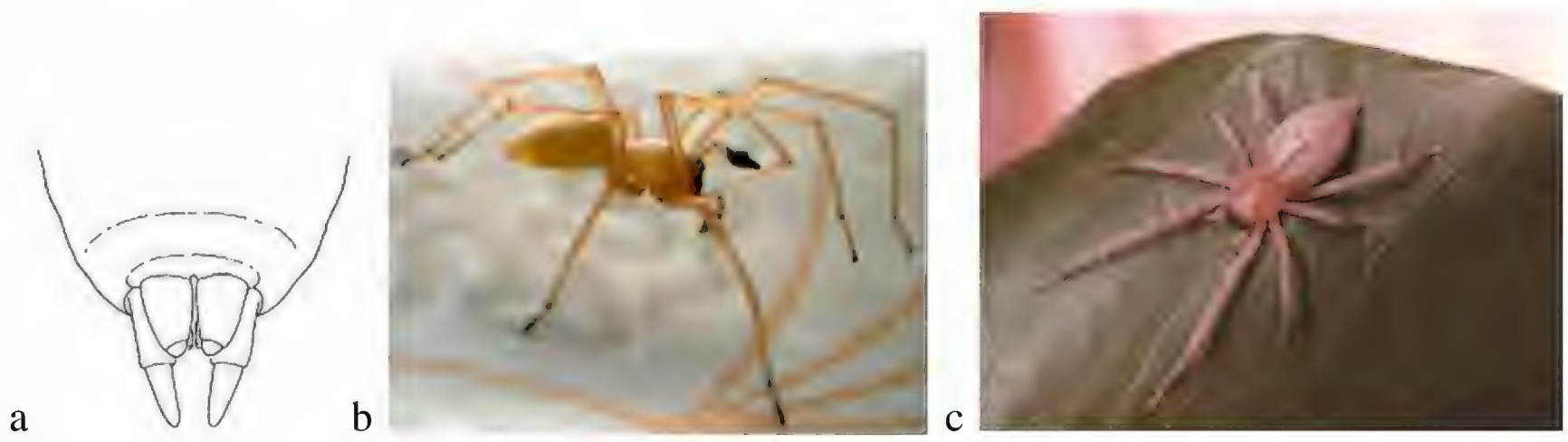


Fig. 37. Eutichurinae, a. spinnerets, ventral view (Afr.Sp. f.33e). *Cheiracanthium isiacum* O. Pickard-Cambridge, 1874, b. ♂. c. ♀.

27. Posterior spinnerets distinctly two-segmented, distal segment conical (Fig. 37a) ..... Eutichuridae [2 genera, 9 species] (Fig. 37)
- Posterior spinnerets with a single segment or if two-segmented, distal segment rounded 28

28. Female with square-shaped epigynum with spherical spermathecae and entrance ducts discernible through integument (Fig. 38b); male palp pear-shaped with short distal embolus, without median apophysis (Fig. 38c) ..... Corinnidae [1 genus, 1 species] (Fig. 38)
- Genitalia not as above 29

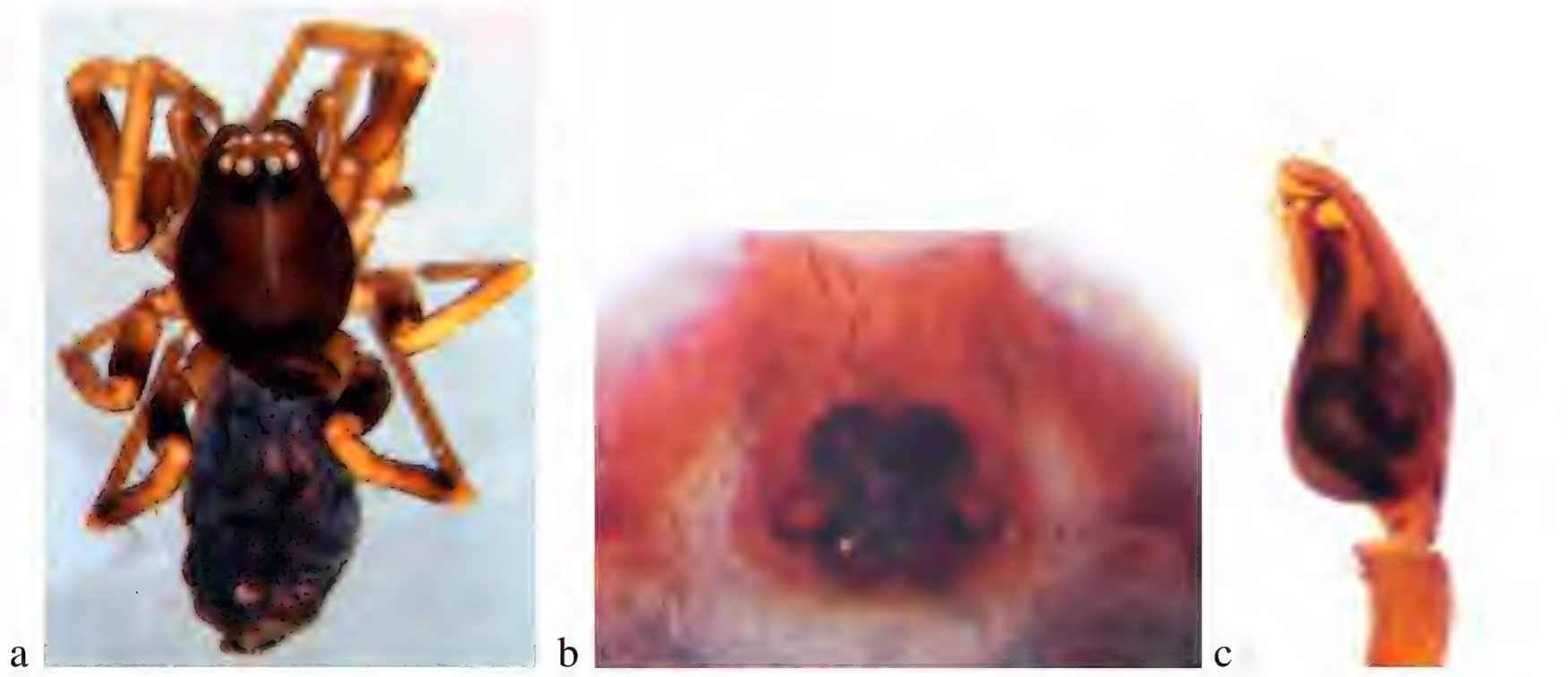


Fig. 38. Corinnidae, *Castianeira antinorii* (Pavesi, 1880) ♀. a. ♀, dorsal view. b. ♀ epigynum, ventral view. c. ♂ palp, ventral view.

29. Median spinnerets of female with three, posterior spinnerets with two large cylindrical gland spigots (Fig. 39a); front legs at least in male with ventral cusps on frontal tibiae and/or metatarsi (Fig. 39b) ..... Trachelidae [1 genus, 1 species] (Fig. 39c)
- Median and posterior spinnerets of female without such spigots 30

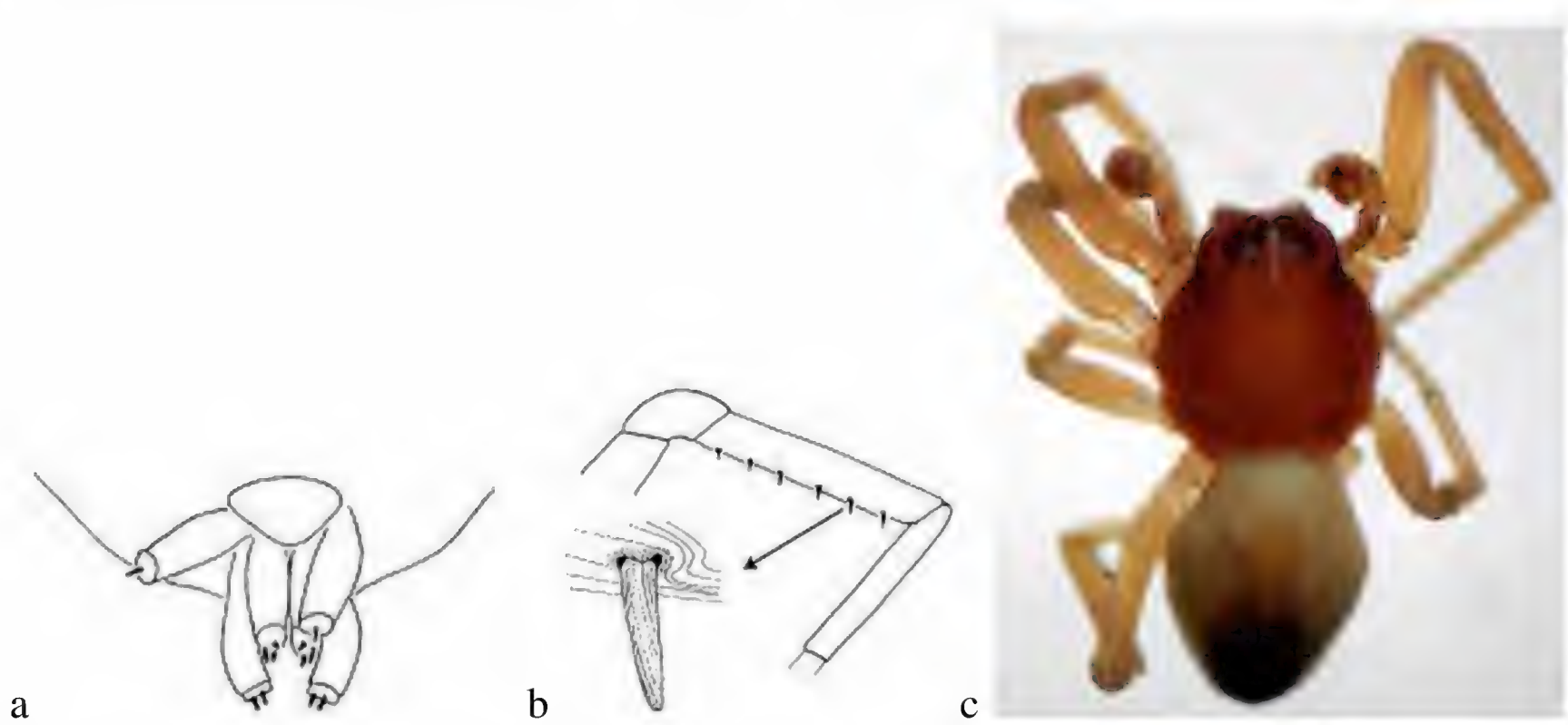


Fig. 39. Trachelidae. a. spinnerets of female, dorsal view (Afr.Sp. f.34c).
b. enlarged cusp on tibia and/or metatarsus of front legs (Afr.Sp. f.34e).
c. *Trachelas minor* O. Pickard-Cambridge, 1872 ♀.

30. Median spinnerets of females laterally flattened, with at least one row of large spigots (Fig. 40a) ..... Liocranidae [1 genus, 2 species] (Fig. 41a,b)
- Median spinnerets of females not flattened, without rows of large spigots (Fig. 40b) ..... Clubionidae [1 genus, 1 species] (Fig. 42a)

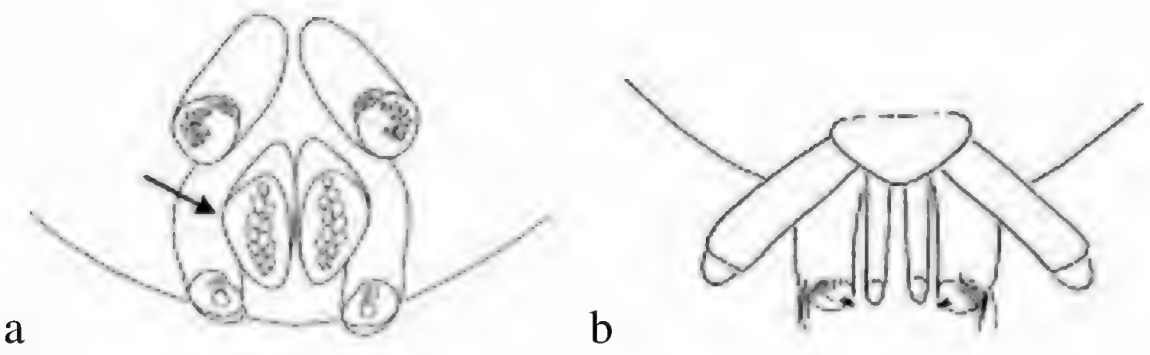


Fig. 40. a. Liocranidae, spinnerets in dorsal view, showing laterally flattened median spinnerets (Afr.Sp. f.34f). b. Clubionidae, spinnerets, dorsal view (Afr.Sp. f.34g).

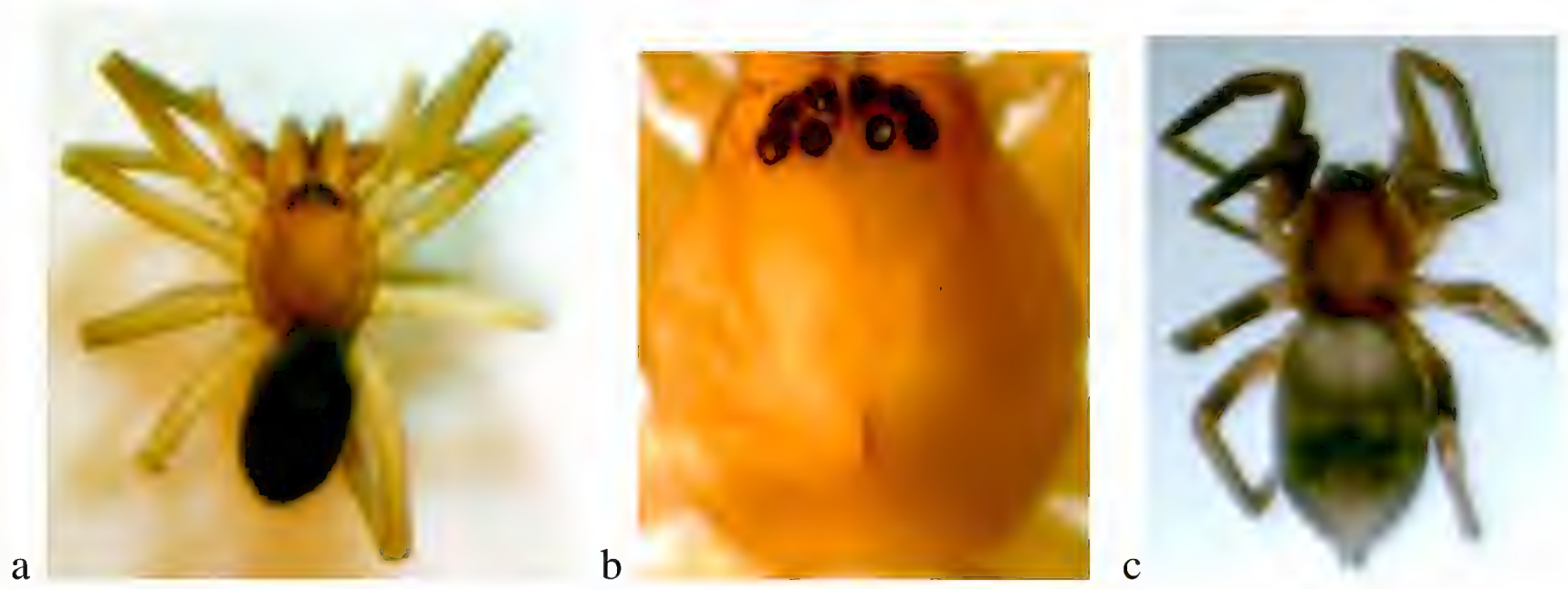


Fig. 41. Liocranidae, *Mesiotelus tenuissimus* (L. Koch, 1866) ♂, b. carapace in dorsal view, showing eye pattern. c. ♀.

31. Tiny spiders, body length less than 2 mm; metatarsi same length or shorter than tarsi; chelicerae with toothed keel instead of usual teeth ..... Synaphridae [1 genus, 1 species] (Fig. 42)
- Larger spiders or if tiny, metatarsi longer than tarsi 32

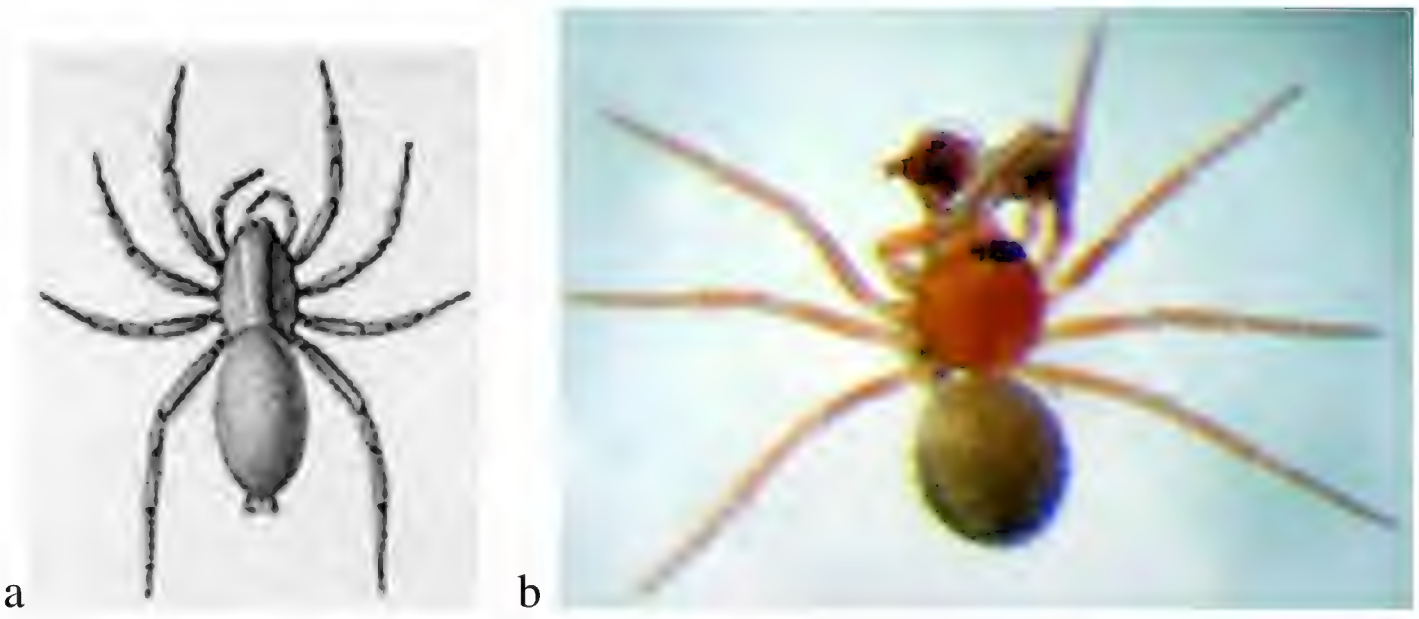


Fig. 42. a. Clubionidae, *Clubiona listeri* Audouin, 1825 ♀ (Descr.Eg. pl.5, f.9).
b. Synaphridae, *Synaphris letourneuxi* (Simon, 1884) ♂.

32. Tarsi with trichobothria, often in a row (Fig. 43) 33
- Tarsi without trichobothria 37

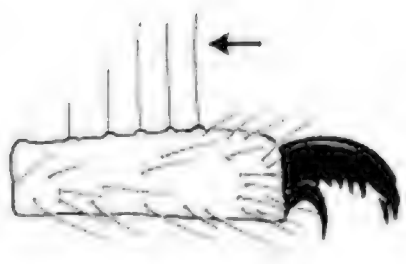


Fig. 43. tarsus, showing trichobothria (Afr.Sp. f.35e).

33. Eyes either in 3 to 4 rows (4:2:2, 2:4:2 or 2:2:2:2) or in three groups 34
- Eyes in two rows 36

34. Clypeus very high; posterior eyes and anterior lateral eyes forming a hexagonal group behind small anterior median eyes (Fig. 44a,b); numerous long spines on tibiae and metatarsi of legs (Fig. 44c) ..... Oxyopidae [2 genera, 7 species] (Fig. 44a)
- Clypeus not as high; eye position and setae on legs different 35

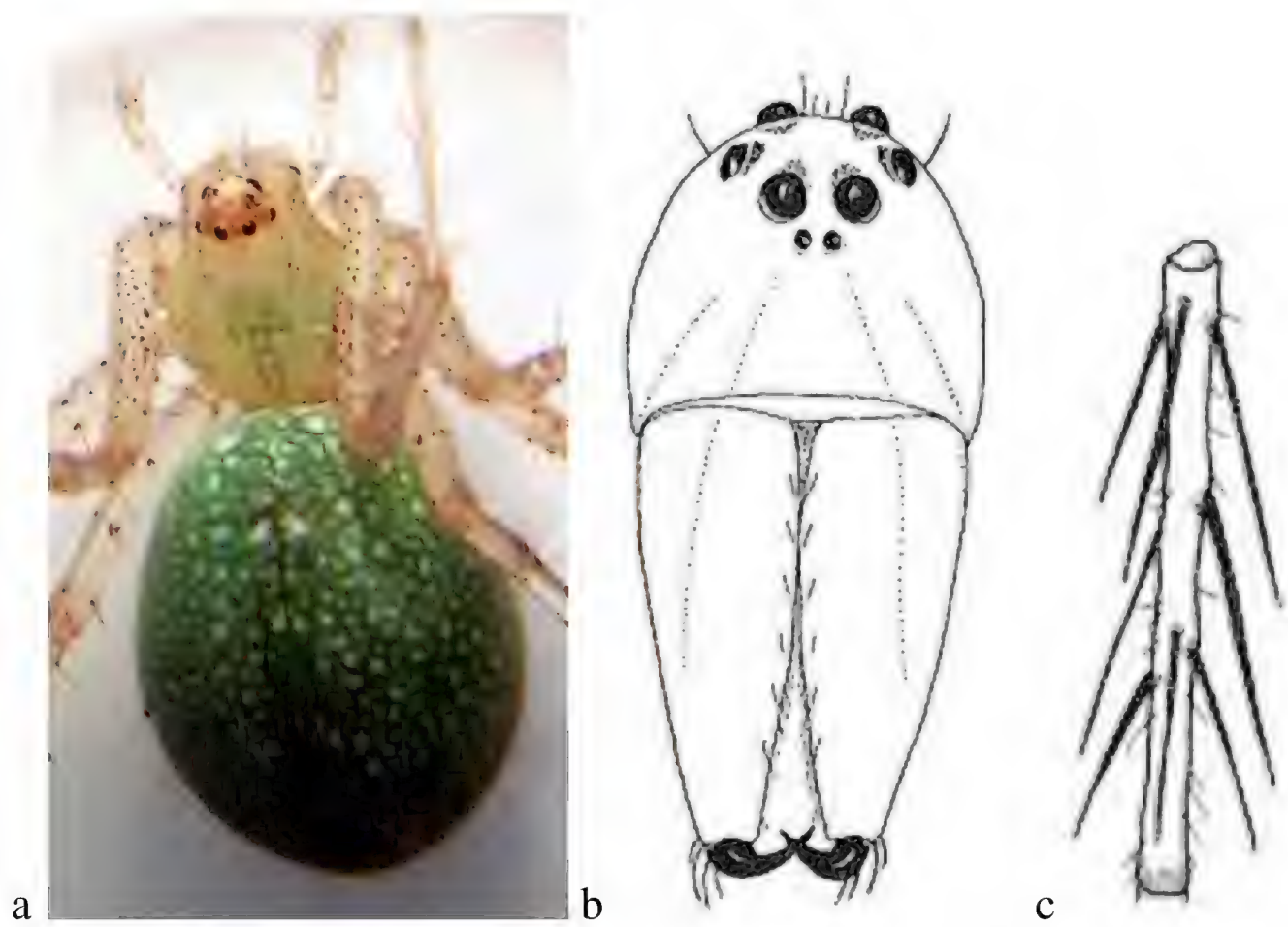


Fig. 44. Oxyopidae, *Peucetia arabica* Simon, 1882. a. juvenile. b. carapace in anterior view, showing eye pattern (Afr.Sp. f.36a). c. leg segment showing long setae (Afr.Sp. f.36b).

35. Eyes sessile, not on tubercles, eye pattern 4:2:2 (Fig. 45); abdomen oval, smoothly rounded posteriorly (Fig. 47a,b); male palpal tibiae without retrolateral apophysis; egg-sac carried attached to spinnerets ..... Lycosidae [18 genera, 44 species] (Fig. 47)
- At least one pair of eyes on shallow tubercles, eye pattern 4:4, 4:2:2 or 2.2.2.2 (Fig. 46); abdomen almost invariably elongated, tapering towards back (Fig. 48); male palpal tibia with retrolateral apophysis; egg-sac carried below sternum between chelicerae and palpi ..... Pisauridae [4 genera, 4 species] (Fig. 48)

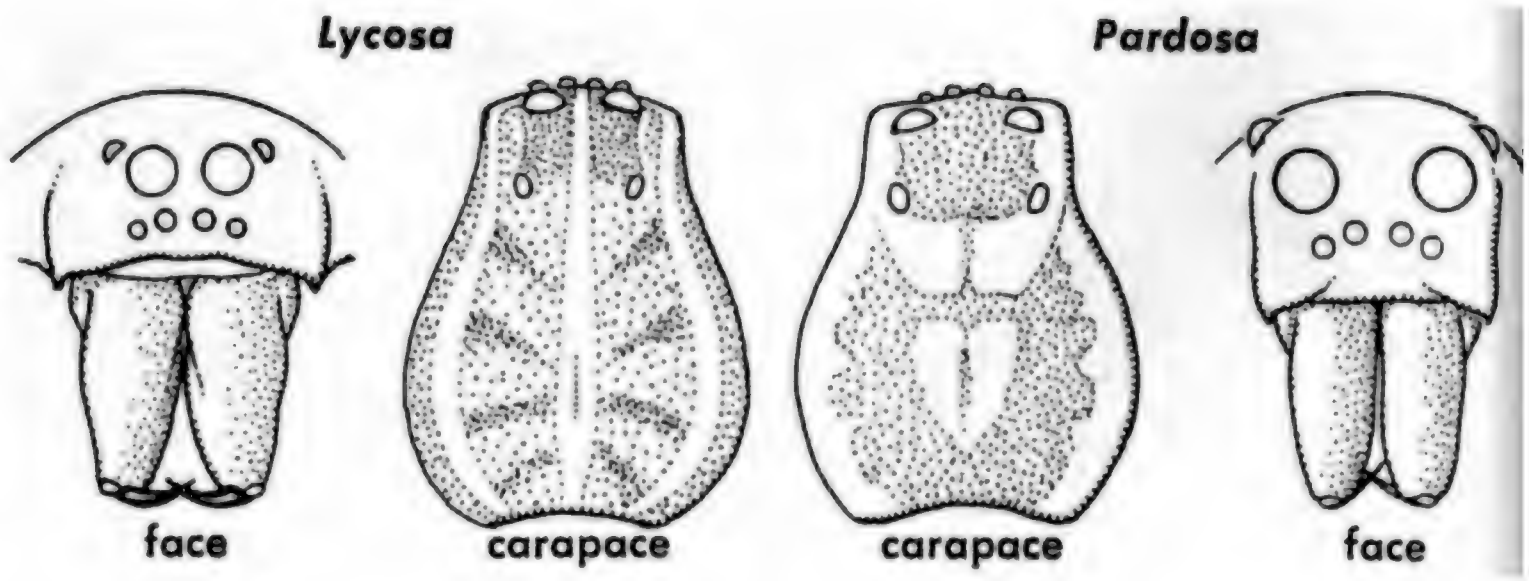


Fig. 45. Lycosidae, carapace in anterior and dorsal view, showing eye pattern (SpK p.82).

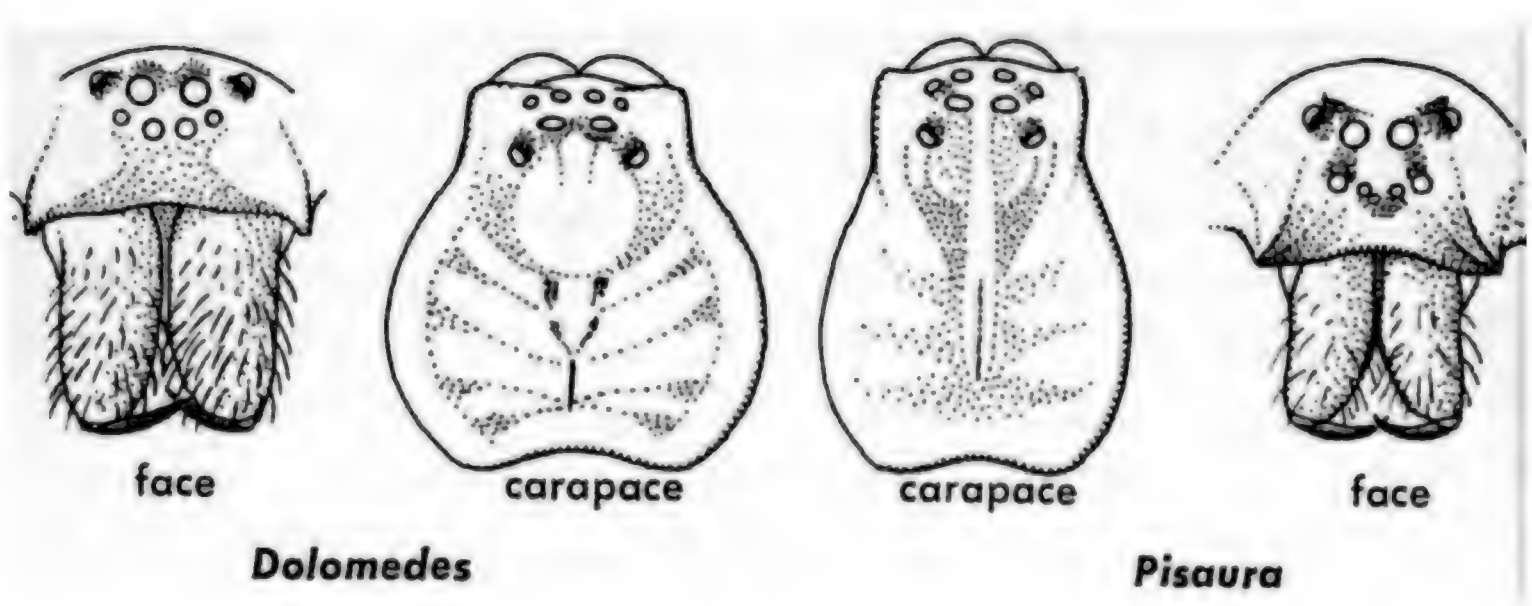


Fig. 46. Pisauridae, carapace in anterior and dorsal view, showing eye pattern (SpK p.78).

Fig. 47. Lycosidae, *Trochosa urbana* O. Pickard-Cambridge, 1876 ♀. a. (Descr.Eg. pl.4, f.6). b. with egg sac attached to spinnerets. c. carrying newly hatched spiderlings. [Photos by Ibrahim A.I. Zaher]

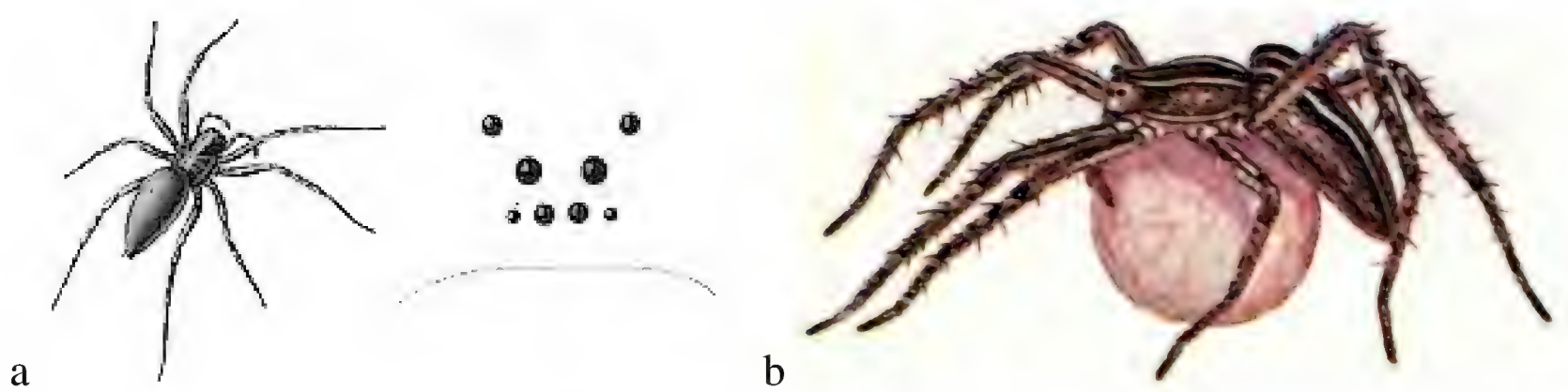


Fig. 48. Pisauridae, a. *Dolomedes hyppomene* Savigny, 1825 ♀, and its eye pattern (Descr.Eg. pl.4, f.9). b. *Pisaura mirabilis* (Clerck, 1757) ♀, with egg-sac below cephalothorax (SpK p.78).

36. Posterior spinnerets long and two-segmented (Fig. 49a); trochanters not notched (Fig. 49b) ..... Agelenidae [4 genera, 7 species] (Fig. 50)
- Posterior spinnerets not particularly long or with one segment only; trochanters may be notched (Fig. 49c); anterior spinnerets longest (Fig. 23c) .....
..... Zodariidae [5 genera, 8 species] (Fig. 51)

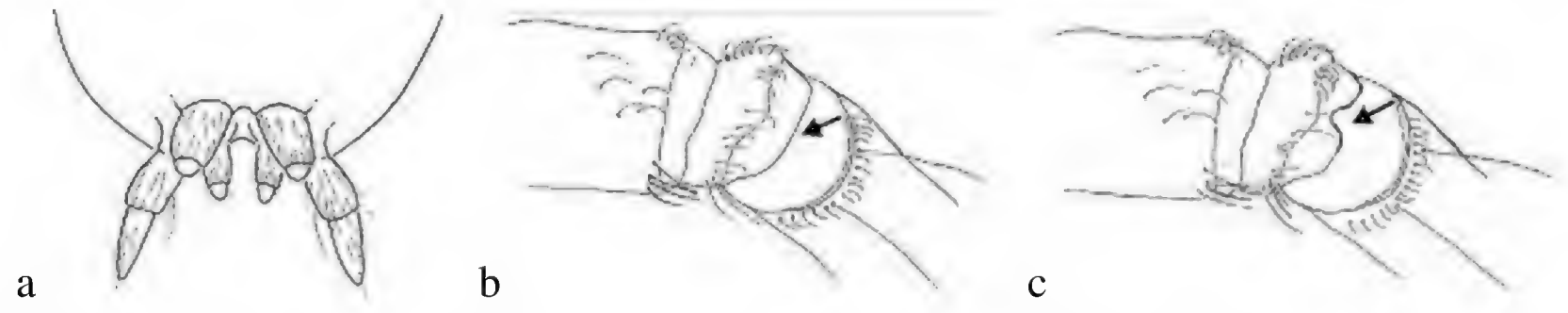


Fig. 49. a. Agelenidae, spinnerets, ventral view (Afr.Sp. f.36h). b. trochanter not notched (Afr.Sp. f.36g). c. notched trochanter (Afr.Sp. f.36f).

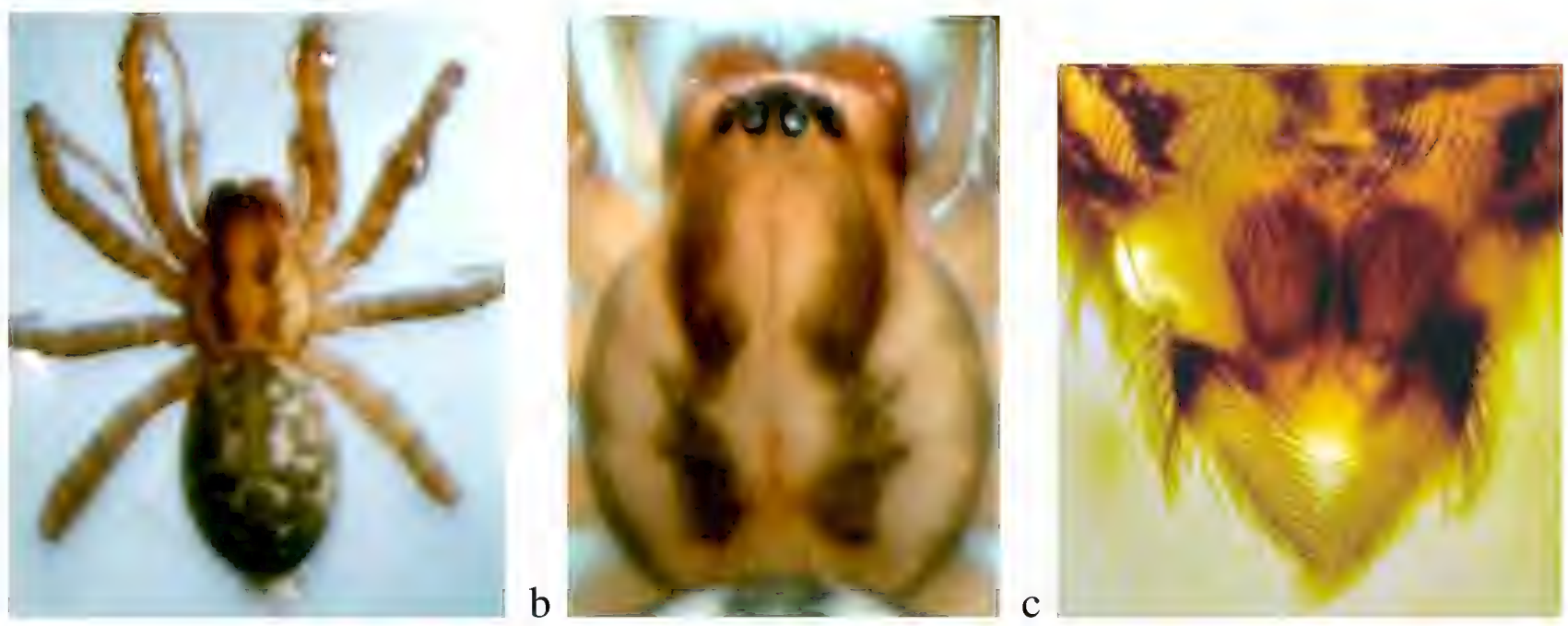


Fig. 50. Agelenidae, *Tegenaria domestica* (Clerck, 1757) ♀. a. dorsal view. b. carapace in dorsal view, showing eye pattern. c. spinnerets.

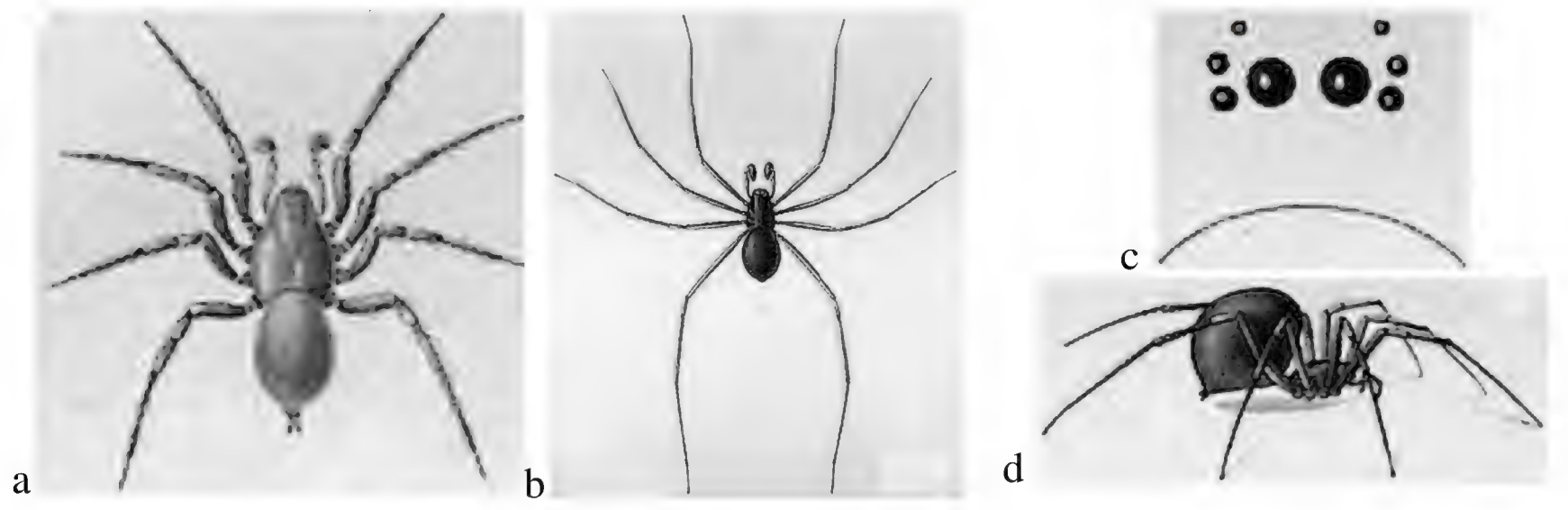


Fig. 51. Zodariidae, a. *a perversa* (Savigny, 1825) ♂ (Descr.Eg. pl.1, f.4).
Zodarion nitidum (Savigny, 1825) b. ♂ (Descr.Eg. pl.3, f.8), c. ♀ (Descr.Eg. pl.3, f.7).

37. Posterior spinnerets straight, very long, last segment at least three times longer than wide (Fig. 52) ..... Hersiliidae [2 genera, 2 species] (Fig. 52)
- Posterior spinnerets not unusually long 38

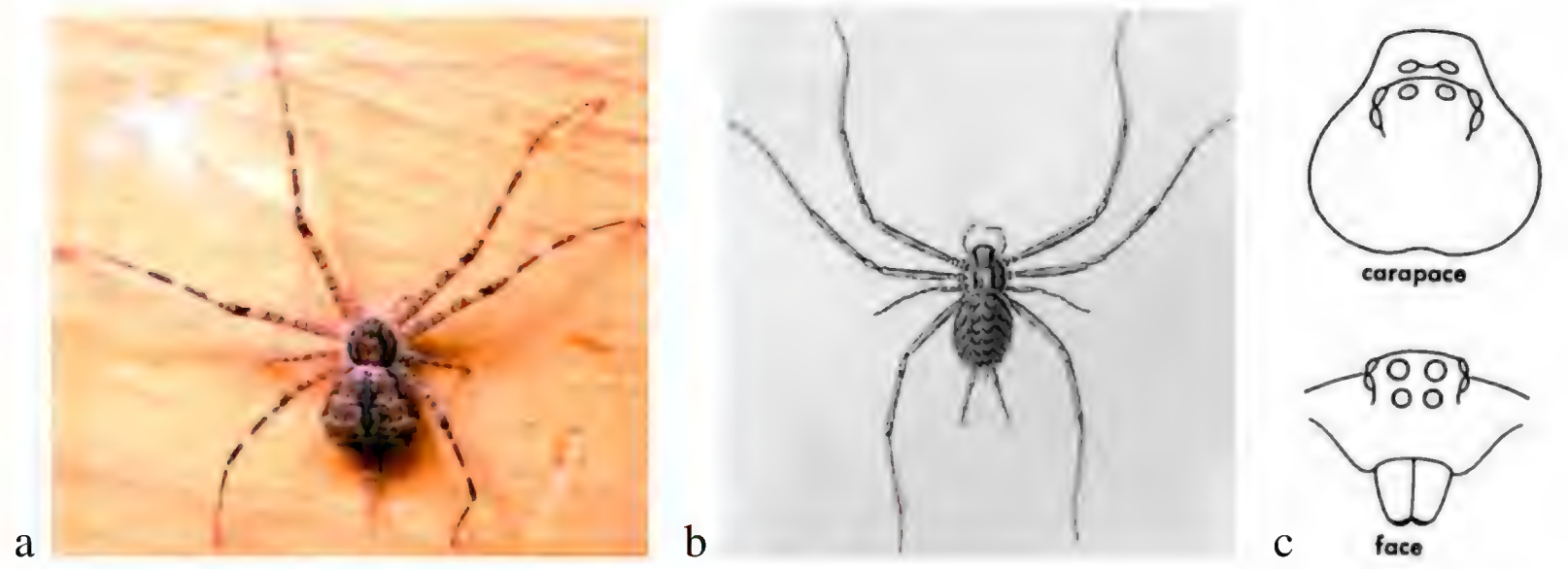


Fig. 52. Hersiliidae, *Hersilia caudata* Savigny, 1825 ♀ [b. (Descr.Eg. pl.1, f.8)].
c. *Hersilia* sp., carapace in dorsal view and anterior view showing eye pattern (SpK p.35).

38. Eyes in three groups, anterior median eyes forming a diad, well separated from other eyes arranged in two triads (Fig. 53a); legs very thin and long, tarsi pseudosegmented ..... Pholcidae [6 genera, 7 species] (Fig. 53b)
- Eye pattern and legs not as above 39

Fig. 53. Pholcidae. a. *Holocnemus pluchei* (Scopoli, 1763) ♀, carapace in dorsal view, showing eye pattern. b. *Nita elsaff* Huber & El-Hennawy, 2007 ♂. c. *Pholcus* sp., carapace in dorsal view showing eye pattern (SpK p.35).

39. Anterior tibiae and patellae with prolateral row of alternating long and short curved spines (Fig. 54b,c) ..... Mimetidae [2 genera, 2 species] (Fig. 54a)
- Legs not as above 40

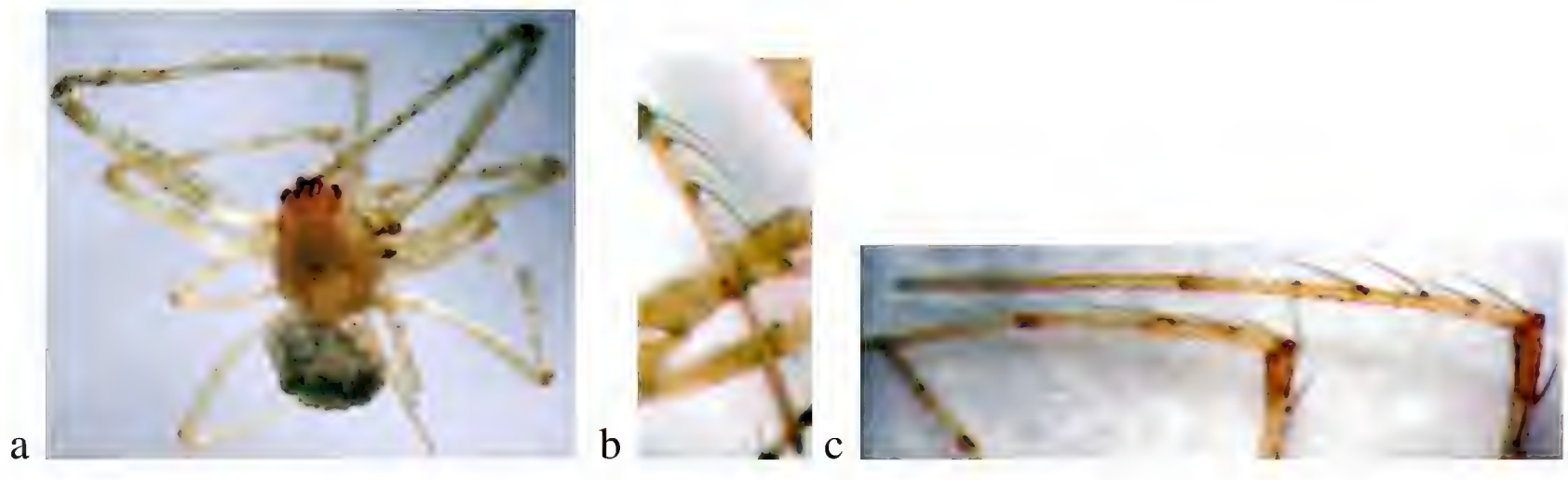


Fig. 54. Mimetidae, *Ero* sp. ♂. a. dorsal view. b,c. legs I,II showing spine rows with alternating long and short spines.

40. Paracymbium a separate sclerite (Fig. 55a); chelicerae often with stridulating file (Fig. 55b); tarsi usually cylindrical (Fig. 55c), anterior tarsi sometimes fusiform .... Linyphiidae [11 genera, 11 species] (Fig. 56a,b)
- Paracymbium fused to cymbium or rudimentary; tarsi variable but often tapering towards claw; chelicerae without stridulating file 41

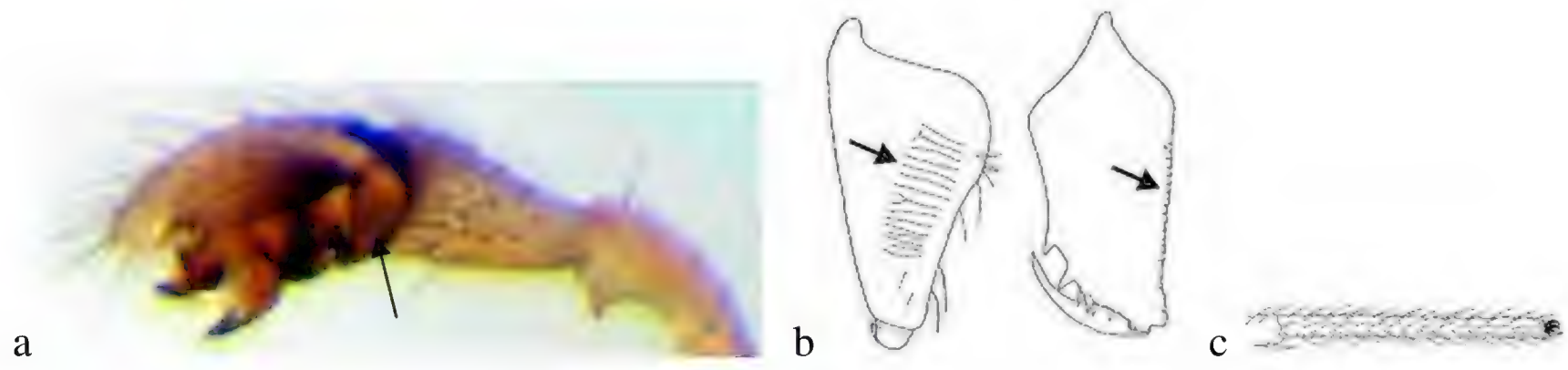


Fig. 55. Linyphiidae. a. *Mermessus denticulatus* (Banks, 1898) ♂, palp in retrolateral view, showing paracymbium. b. chelicerae in lateral and frontal views, showing stridulating ridges (Afr.Sp. f.37h). c. tarsus IV (Afr.Sp. f.84e).

Fig. 56. Linyphiidae. a. *Mermessus denticulatus* (Banks, 1898) ♂.
b. *Ostearius melanopygius* (O. Pickard-Cambridge, 1879) ♀.

41. Tarsi IV with ventral comb of serrated bristles (Fig. 57a) (sometimes absent); brownish rings around eyes (Fig. 57b); labium not rebordered (Fig. 57c); paracymbium small hook at distal promargin of cymbium (Fig. 58a) .... Theridiidae [14 genera, 29 species] (Fig. 58)
- Tarsi IV without ventral comb of serrated bristles; eyes without brownish rings; labium thickened anteriorly (rebordered); orbwebs 42

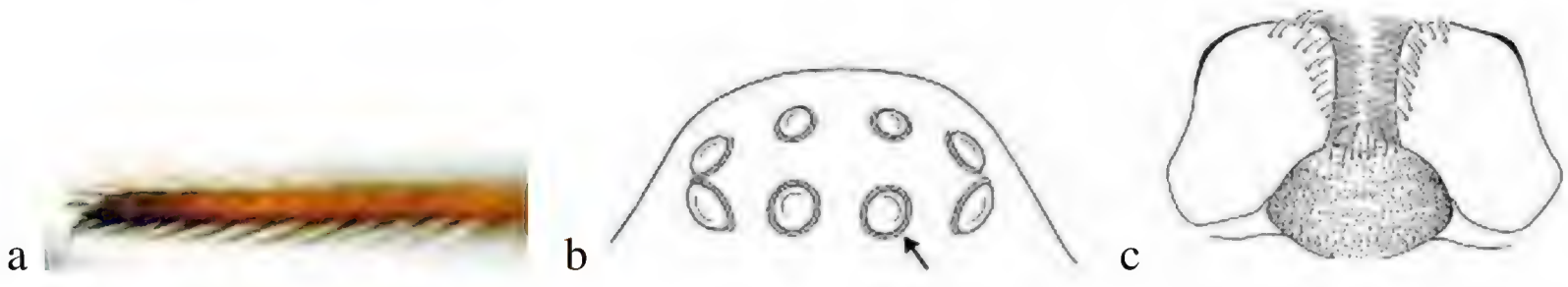


Fig. 57. Theridiidae. a. leg IV, showing row of serrated bristles. b. eyes, showing brownish rings (Afr.Sp. f.38b). c. labium not rebordered (Afr.Sp. f.38d).

Fig. 58. Theridiidae. a. *Theridion melanostictum* O. Pickard-Cambridge, 1876 ♂ palp retrolateral view. b. *Theridion incanescens* Simon, 1890 ♀. c. *Theridion spinitarse* O. Pickard-Cambridge, 1876 ♀. d. *Latrodectus geometricus* C.L. Koch, 1841 ♀. e. *Latrodectus tredecimguttatus* (Rossi, 1790) ♂.

42. Chelicerae usually long or swollen, with numerous teeth, modified in males (Fig. 59a); paracymbium elongated or squat (Fig. 59b); epigynum usually indistinct; epigastric region not sclerotized ..... Tetragnathidae [2 genera, 5 species] (Fig. 59c)
- Chelicerae usually not modified; paracymbium often hook-shaped (Fig. 60a); epigynum sclerotized, distinct, often with scape (Fig. 60b) ..... Araneidae [14 genera, 21 species] (Fig. 60d,e)

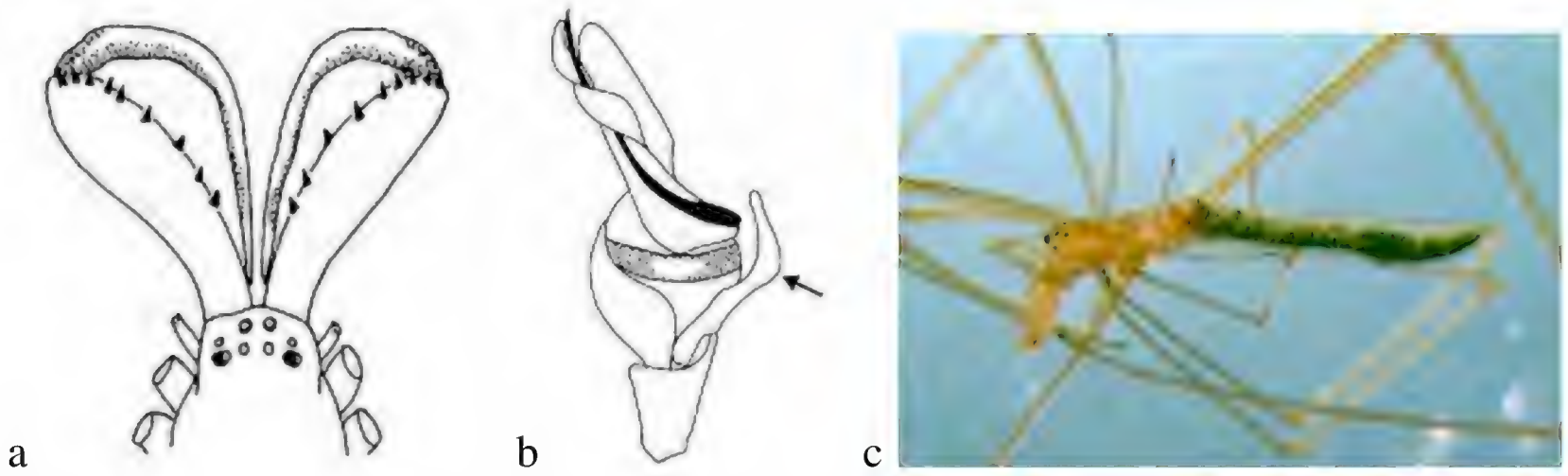
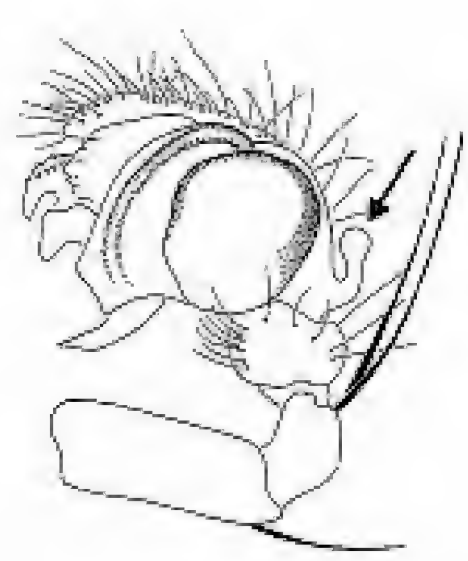
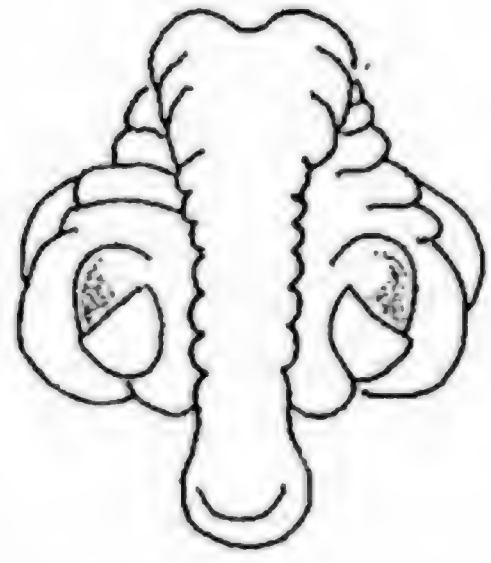


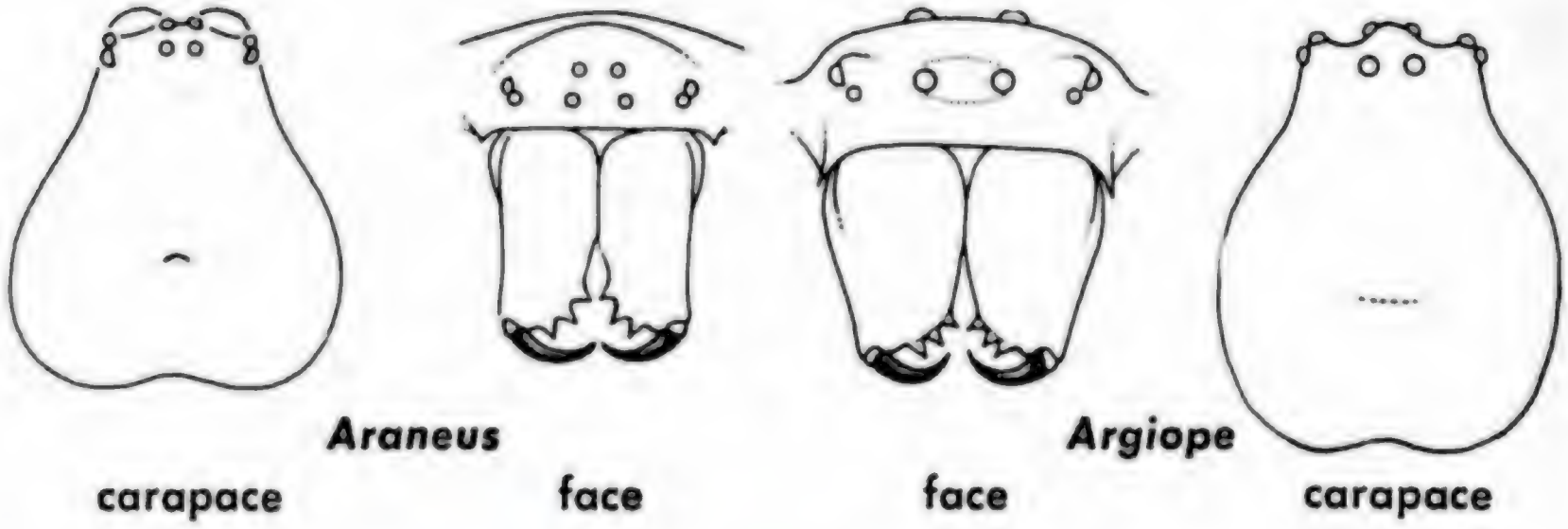
Fig. 59 Tetragnathidae. a. chelicerae, dorsal view (Afr.Sp. f.39d). b. male palp, in ventral view, showing elongated paracymbium (Afr.Sp. f.39e). c. *Tetragnatha* sp. ♂.



a



b



c

d

e

Fig. 60. Araneidae. a. male palp in ventral view, showing hook-like paracymbium (Afr.Sp. f.39g). b. epigynum, ventral view (Afr.Sp. f.39f). c. *Araneus* sp. and *Argiope* sp., carapace in dorsal view and anterior view showing eye pattern (SpK p.53). d. *Cyrtophora citricola* (Forskål, 1775) ♀. e. *Argiope trifasciata* (Forskål, 1775) ♂♀.

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Özşen, Ö.: 114[1].
Öztürk. N.: 133[2].
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Rajoria, A.: 203, 204, 205, 206[1].
Rakha, M.A.: 034[3].
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Shereef, G.M.: 034[1].
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Topçu, A.: 077[1], 081[1], 085[1], 090, 095[3], 100[3], 101[3], 125[3], 138[2], 156[1], 191[2], 211[2], 219[2], 227[1].
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Türker, H.: 189[3].

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Yiğit, N.: 093[4], 094[3].
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Zaher, M.A.: 079[1], 207[4].
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Zamani, A.: 170, 183[3].
Zohdi, G.I.: 065[4], 066[4], 070[4].

Hymenoptera - Family Pompilidae (Spider wasps)

El-Hennawy, H.K.: 001, 035.

Opilionida (Opiliones, Harvestmen)

Audouin, V.: 029.
Cokendolpher, J.C.: 016.
Demir, H.: 104[2], 127[3], 128[3].
El-Hennawy, H.K.: 044, 167, 172.
Eman, Ö.K.: 127[2].
Kurt, K.: 104[1], 127[1], 128[2].
Mitov, P.G.: 149.
Özdikmen, H.: 128[1].
Seyyar, O.: 104[3], 127[4].
Topçu, A.: 104[4].

Palpigradida (Palpigradi)

El-Hennawy, H.K.: 167, 172.

Pseudoscorpionida (Pseudoscorpiones, False Scorpions)

Audouin, V.: 029.
El-Hennawy, H.K.: 009, 010, 012, 015, 019, 022, 036, 044, 068, 076, 167, 172.

Scorpionida (Scorpiones)

Abdel-Nabi, I.: 074[1].
Abdel-Rahman, M.: 074[3].
Akkari, N.: 144[3].
Ali, M.O.: 049[1].
Alioua, Y.: 145[2].
Audouin, V.: 029.
Blagoev, G.: 144[4].
Boumezzough, A.: 146[2], 177[3], 196[3].
Bragina, T.M.: 168[1].
Çalışır, G.: 106[3].
Chenchouni, H.: 145[3].
Cloudsley-Thompson, J.L.: 142[2].

El Bakary, Z.: 049[4].
Elhidan, M.A. 177[2], 196[1].
El Menshawy, O.M.: 049[3].
El-Hennawy, H.K.: 003, 007, 008, 011, 017, 022, 025, 044, 050, 068, 076, 120, 167, 172.
El-Nagar, M.H.: 057[3].
Fet, V.: 144[5].
Graham, M.R.: 144[1].
Hasnaoui, C.: 228[2].
Karataş, A.: 083, 084.
Kesmezoğlu, S.: 096[3].
Khalil, N.: 122[1].
Koç, H.: 096[2].
Kovařík, F.: 040, 045, 047, 048, 053, 061, 063.
Lebbal, S.: 228[3].
Lourenço, W.R.: 142[1], 143[1], 190, 209.
McVean, A.: 057[1], 074[2].
Meddour, A.: 228[1].
Mostafa, M.A.: 163[3].
Omran, M.A.A.: 057[2], 074[4], 147.
Rossi. A.: 169.
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Sadine, S.: 145[1].
Sarhan, M.: 049[5], 163[1].
Sayed, A.B.: 163[2].
Simon, E.: 143[2].
Slimani, T.: 146[3].
Stewart, A.K.: 091.
Stoev, P.: 144[2].
Touloun, O.: 146[1], 177[1], 196[2].
Yağmur, E.A.: 096[1], 106[1], 122[2], 168[2].
Yalçın, M.: 096[4], 106[2].
Yasin, A.E.: 163[4].

Solpugida (Solifugae, Sun Spiders, Camel Spiders, Wind Scorpions)
Audouin, V.: 029.
Bayram, A.: 148[4].
El-Hennawy, H.K.: 015, 018, 022, 039, 042, 044, 050, 068, 076, 103, 113, 167, 172.
Erdek, M.: 148[2].
Koç, H.: 148[3].
Melekoğlu, A.: 148[5].
Yiğit, N.: 148[1].

* The superscript number = 1st, 2nd, 3rd, … author.

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New Species, New Names

Araneida, Araneae

Cheiracanthium siwi El-Hennawy, 2001 from Egypt (*Serket*, 7(4): 114-155).
(A new name of *C. tenue* Denis, 1947, a primary junior homonym of *C. tenue* L. Koch, 1873).

Eresus algericus El-Hennawy, 2004 from Algeria (*Serket*, 9(1): 1-4).

Eresus jerbae El-Hennawy, 2005 from Tunisia & Algeria (*Serket*, 9(3): 87-90).
Hersiliola eltigani El-Hennawy, 2010 from Sudan (*Serket*, 12(1): 23-31).

Zelotes henderickxi Bosselaers, 2012 from Canary Islands (*Serket*, 13(1/2): 83-90).
Vankeeria Bosselaers, 2012 from Greece
Vankeeria catoptronifera Bosselaers, 2012 from Greece

Enoplognatha iraqi sp Najim, Al-Hadlak & Seyyar, 2015 from Iraq (*Serket*, 14(4): 185-188).

Hypsosinga satpuraensis Bodkhe, Uniyal & Kamble, 2016 from India (*Serket*, 15(2): 92-96).

Cambalida dhupgadensis Bodkhe, Uniyal & Kamble, 2016 from India (*Serket*, 15(2): 97-103).

Bodkhe, Uniyal, Kamble, Manthen, Santape & Chikhale, 2917 from India (*Serket*, 15(3): 119-123).

Scorpionida, Scorpiones

Pandinus (*Pandinops*) *pococki* Kovařík, 2000 from Somalia (*Serket*, 7(1): 1-7).

Chaerilus petrzelkai Kovařík, 2000 from Vietnam (*Serket*, 7(2): 38-77).
Chaerilus tichyi Kovařík, 2000 from Malaysia
Chaerilus tryznai Kovařík, 2000 from China (Tibet),

Compsobuthus becvari Kovařík, 2003 from Pakistan (*Serket*, 8(3): 87-112).
Compsobuthus jakesi Kovařík, 2003 from Iraq
Compsobuthus kabateki Kovařík, 2003 from Egypt
Compsobuthus kafkai Kovařík, 2003 from Iran
Compsobuthus kaftani Kovařík, 2003 from Iran
Compsobuthus plutenkoi Kovařík, 2003 from Iran
Compsobuthus seicherti Kovařík, 2003 from Sudan
Compsobuthus sobotniki Kovařík, 2003 from Iran

Butheoloides cimrmani Kovařík, 2003 from Ghana (*Serket*, 8(3): 125-127).

Scorpio niger Lourenço & Cloudsley-Thompson, 2012 from Niger (*Serket*, 13(1/2): 1-7).
Buthus orientalis Lourenço & Simon, 2012 from Egypt (*Serket*, 13(1/2): 8-15).

Pandinus (*Pandinurus*) *vachoni* Rossi, 2014 from Chad (*Serket*, 14(1): 6-14).

Androctonus santi Lourenço, 2015 from Niger (*Serket*, 14(4): 168-174).

Buthus centroafricanus Lourenço, 2016 from Central African Republic (*Serket*, 15(2): 71-79).

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30 years, 15 volumes, 57 parts, 2369 pages, 230 papers,
161 authors of 25 countries [1 from: Austria, Canada, Czech Republic, Denmark, Germany, Israel, Italy, Kazakhstan, Russia, Syria; 2 from: Bangladesh, Bulgaria, France, Iraq, Saudi Arabia; 3 from: Belgium, Iran, South Africa; 4 from: Morocco, U.K., U.S.A.; 8 from: Algeria; 10 from: India; 48 from Egypt; and 52 from Turkey]

New names: 1 genus + 9 species of spiders and 18 species of scorpions.

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